DOCUMENT RESUME

ED 283 970 CE 047 634

AUTHOR Lee, Jasper S., Comp.; Cheatham, Danny L., Comp.
TITLE Summary of Research in Extension (A Compilation of Abstracts for 1983-1985).
INSTITUTION Mississippi State Univ., Mississippi State. Dept. of Agricultural and Extension Education.
PUB DATE Mar 86
NOTE 233p.
PUB TYPE Reference Materials - Directories/Catalogs (132)

EDRS PRICE MF01/PC10 Plus Postage.
DESCRIPTORS Abstracts; *Agricultural Education; Community Development; Community Programs; Community Resources; Conservation (Environment); *Extension Education; *Home Economics; International Education; Natural Resources; Postsecondary Education; Program Administration; *Program Descriptions; Program Evaluation; *Research Projects; Research Reports; Secondary Education; Staff Development; State Programs; Student Organizations; Vocational Education; *Volunteers; Volunteer Training
IDENTIFIERS 4 H Clubs; *Cooperative Extension Service

ABSTRACT

This document contains 200 one-page abstracts intended to provide a linkage between producers and consumers of research related to the Cooperative Extension Service. The abstracts are organized into nine broad categories: administration, agriculture/natural resources, accountability and evaluation, community resource development, 4-H and youth, home economics, international, personnel and staff development, and volunteerism. (Abstracts of studies that could be placed in more than one area are listed only once in the category deemed most appropriate.) Abstracts are listed alphabetically in each of the nine categories by state and by names of principal investigators within states. Indexes also are provided by author and state. Each listing contains bibliographical information and information on purpose, method, findings, and source of additional information. (KC)

***********************************************************************
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
***********************************************************************

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☑ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

- Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J Lee

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED283970

# SUMMARY OF RESEARCH IN EXTENSION

## 1983-1985

Department of Agricultural and
Extension Education
College of Agriculture and Home Economics
Mississippi State University

CE047634

This summary was compiled and published through the Department of Agricultural and Extension Education at Mississippi State University in March of 1986.

For Information Contact:

Research Summary
Department of Agricultural and Extension Education
P. O. Drawer AV
Mississippi State, MS 39762

Telephone: (601) 325-3326

# SUMMARY OF RESEARCH IN EXTENSION

## (A Compilation of Abstracts for 1983-1985)

Compiled by

Jasper S. Lee
Professor and Head
Department of Agricultural and Extension Education
and Extension Training Officer

and

Danny L. Cheatham
Associate Professor
Department of Agricultural and Extension Education
and Staff Assistant, MCES

College of Agriculture and Home Economics
Mississippi State University
Mississippi State, Mississippi

1986

# ACKNOWLEDGEMENTS

The assistance of many individuals is gratefully acknowledged. This summary was made possible by contributions of individuals from throughout the United States who were interested in research related to the Cooperative Extension Service. Without their diligence in submitting abstracts this publication would not have been possible.

Several individuals at Mississippi State University made important contributions. Doctors Shirley Hastings, Frances Graham, and Jimmy Richardson of the Mississippi Cooperative Extension Service are acknowledged for their work in reviewing the organization of the abstracts. The faculty and staff of the Department of Agricultural and Extension Education provided assistance in many ways. Special appreciation is expressed to Mrs. Linda Wood, Mrs. Jan Crumby, Mrs. Jacque Tisdale, and Mrs. Jeanette Evans for their work in typing and organizing the manuscript. Mrs. Evans is also recognized for her help in preparing mailings, receiving orders, and shipping the Summary.

# TABLE OF CONTENTS

Page

Acknowledgements . . . . . . . . . . . . . . . . . . . . . . . . . ii
About This Publication . . . . . . . . . . . . . . . . . . . . . . xiii

ADMINISTRATION . . . . . . . . . . . . . . . . . . . . . . . . . . 1
An Analysis of the County Extension Director's Administration Role in Michigan . . . . . . . . . . 3
Role Stress Resulting from Role Conflict and Ambiguity Related to Organizational Change . . . . . 4
An Examination of Selected Factors Associated with Attitudes of Extension Professionals Toward Women in Management . . . . . . . . . . . . . . . . . 5
An Analysis of Positional Involvement of the State Home Economics Administrator in Policy Decision-Making in State Cooperative Extenion Organizations . 6
Burnout and Associated Factors Among Administrators/ Mid-Managers of the Cooperative Extension Service in the North Central Region . . . . . . . . . . . . 7

AGRICULTURE/NATURAL RESOURCES . . . . . . . . . . . . . . . . . . 9
Technical Innovation in the Pacific Coast Commercial Trawling and Salmon Trolling Fisheries . . . . . . . 11
Determination of the Need for Extension Horticultural Education for Garden Center Employees . . . . . . . 12
Analysis of Factors Influencing the Adoption of Beef Cattle Management Practices in Georgia Beef Enterprises . . . . . . . . . . . . . . . . . . . . 13
Analysis of Factors Influencing the Adoption of Estrus Synchronization in Georgia Beef Enterprises . 14
An Analysis of Beef Cattle Marketing in Tangipahoa Parish, Louisiana, 1984 . . . . . . . . . . . . . . 15
Marketing Practices of Small Vegetable Producers in St. James Parish . . . . . . . . . . . . . . . . . 16
An Analysis of Farmers' Soil Testing Practices in Three Louisiana Parishes . . . . . . . . . . . . . . 17
The Relationship Between Crawfish Production Practices in Terrebonne Parish and Yield . . . . . . . . . . . 18
A Study of Soybean Production Practices and Yields in Allen Parish Louisiana, 1983 . . . . . . . . . . . 19
Factors Affecting Farm Safety Practices of Farmers . . 20
A Study of Management Practices of Horse Owners in Vernon Parish . . . . . . . . . . . . . . . . . . . 21
An Assessment of Present and Future Needs for Workers Having Agricultural Competencies in Carroll and Howard Counties, Maryland . . . . . . . . . . . . . 22
Farmland Preservation in Westfield, Massachusetts . . . 23
A Computer-Assisted Forest Resource Assessment Procedure for the Cooperative Extension Service . . 24
Impact of 'Farm and Ranch Report' on Nebraska Farmers and Ranchers Over the Initial Two Years . . 25

An Evaluation of the Grain Marketing Program in Mercer County, Ohio . . . 26
Characteristics of and Management Practices Used by Pennsylvania Sheep Producers . . . 27
The Planning, Implementation and Evaluation of an Inservice Training Program in Dairy Udder Health . . 28
Grain Corn and Grain Sorghum: A Yield Comparison in Cache County Area of Utah . . . 29
A Comparison of Utah Farmers' Perceived Manpower and Training Needs in 1980 and 1984 . . . 30
The Impact of Demonstration Methods to Measure Cage Layer Waste as a Fertilizer Source . . . 31
Controlling Iron Chlorisis in Raspberry Plants Utilizing Selected Commercial Product . . . 32
Effect of Selected Herbicides on Wild Oat and Broadleaved Weeds in Spring Barley . . . 33
A Comparison of Employee Demand and Job-entry Requirements for Utah's Farm Implement Industry in 1981 and 1985 . . . 34
The Alberta Certified Feeder Program for Preconditioned and Preimmunized Calves . . . 35
Crops Information Needs of Farmers as Perceived by Selected West Virginia Farmers, County Extension Agents and Vocational Agriculture Teachers . . . 36
Wyoming's Ked-free State Program . . . 37

EVALUATION/ACCOUNTABILITY . . . 39
Effects of Color, Format and Severity of Issue on Response Rate of Mail Questionnaires When Respondent Population Has Some Familiarity With Sender . . . 41
Role Perception of the Cooperative Extension Service in Non-Metropolitan Counties as Perceived by County Agents, Voluntary Association Members and Community Members . . . 42
A Comparison of Extension Staff and Public Leaders' Opinions Regarding Program Development and Evaluation in the Cooperative Extension Service . . 43
Cooperative Extension in Northern Idaho: Who Uses Our Services? Results of a Four County Survey . . . 44
Future Direction of the Cooperative Extension Service as Perceived by Extension Personnel and Selected Public Leaders in Iowa . . . 45
Organization and Management for Effective Impact Studies in the Cooperative Extension Service . . . 46
Developing a Conceptual Framework for Evaluating Economic and Social Consequences of Cooperative Extension Work Impact . . . 47
The Political Economy of Extension Program Design: Institutional Maintenance Issues in the Organization and Delivery of Extension Programs . . 48
Clientele and Council Officer's Perceptions of the Missouri Agricultural Extension Service . . . 49

Clientele and Council Officer's Perceptions of the Missouri Agricultural Extension Service . . . . . . 49
The Cooperative Relationship Between Vocational Agriculture Teachers and County Extension Agents in North Carolina . . . . . . . . . . . . . . . . . . . 50
Perceptions of County Commissioners Toward the Minnesota Extension Service . . . . . . . . . . . . 51
County Extension Agricultural Agents' Perceptions of the Effectiveness of Selected Criteria for Program Evaluation in the Oklahoma Cooperative Extension . . 52
Role of the Cooperative Extension Service as Perceived by Personnel of Other Selected Southwest Oklahoma USDA Agencies . . . . . . . . . . 53
The Importance of Criteria for Evaluating Organizational Effectiveness as Perceived by Selected Extension Decision Makers . . . . . . . . . 54
Criteria for Assessing the Cooperative Extension Program Planning Process in West Central District of Virginia . . . . . . . . . . . . . . . . . . . . 55
A Naturalistic Evaluation of the Family Community Leadership Program . . . . . . . . . . . . . . . . . 56
The Role of Extension in Rural America as Perceived by United State Senators . . . . . . . . . . . . . . 57

COMMUNITY RESOURCE DEVELOPMENT . . . . . . . . . . . . . . . 59
Environmental Perspectives in Georgia . . . . . . . . . 61
Effectiveness of Extention CRD Advisory Committees as Perceived by Lay Members and Extension Professionals in Louisiana . . . . . . . . . . . . . 62
Poverty: A Descriptive Study of Attitudes and Aspirations Among Selected Respondents in North Baton Rouge . . . . . . . . . . . . . . . . . . . . 63
Educational Needs of Hispanics in the Lansing, Michigan Area: A Survey . . . . . . . . . . . . . . 64
Documenting and Quantifying the Outcomes of the Community Development Process . . . . . . . . . . . 65
The Effect of a Litter Education Program on Attitudes and Behavior of Second and Fourth Graders in a Selected Ohio School System . . . . . . . . . . . . 66
A Community Development Guidebook for Rural Public Transit . . . . . . . . . . . . . . . . . . . . . 67
A Guidebook for Rural Physician Services . . . . . . . 68
Assessment of the Recreational Preferences of the Residents of Clallam County, Washington . . . . . . 69

4-H AND YOUTH . . . . . . . . . . . . . . . . . . . . . . 71
Factors Contributing to Nonreenrollment of 4-H Club Members in Southeastern Florida . . . . . . . . 73
An Experimental Evaluation of Resource Materials on Leaders/Delegation for 4-H Youth . . . . . . . . 74
A Study of Management Practices of Youth Owning Horses in Jackson Parish . . . . . . . . . . . . . . 75
Pets, Early Adolescents, and Families . . . . . . . . . 76

Michigan Early Adolescent Survey: Final Report . . . . 77
4-H Calculating Consumer Project: Its Effect on Members' Knowledge, Attitude, and Behavior . . . . . 78
Perceptions of 4-H Members, Leaders and County Agents Toward the Montana 4-H Vegetable Gardening Projects . . . . . . . . . . . . . . . . . . . . . 79
Attitudinal Differences: A Study Comparing 4-H Members and Dropouts, Ages 13 to 15, in 16 Montana Counties . . . . . . . . . . . . . . . . . . 80
Accident Study of Three Wheel All-terrain Vehicles . . 81
History of 4-H in Nebraska . . . . . . . . . . . . . . 82
Self Concept, 4-H Camp Setting . . . . . . . . . . . . 83
Quality Indicators, 4-H Club Delivery Method . . . . . 84
4-H Impact, Nebraska Home Extension Club Members . . . 85
Task Performance and Perceived Training Needs of North Dakota 4-H Ambassadors . . . . . . . . . . . . 86
Factors Related to Reenrollment in 4-H of Eight- through Twelve-Year-Old Members . . . . . . . . . . 87
Effective Communication Media for Potential Minority 4-H Youth in Franklin County as Perceived by the County 4-H Minority Advisors . . . 88
Perceptions of 4-H Alumni from Four Ohio Counties Concerning the Impact of 4-H on Their Career Development . . . . . . . . . . . . . . . . . . . . . 89
The Relationship Between the Extent to Which a County is Rural or Urban and Characteristics of the County's 4-H Program . . . . . . . . . . . . . . . 90
Draft Horse . . . . . . . . . . . . . . . . . . . . . . 91
4-H Leaders' and 4-H Members' Attitudes Toward Selected Aspects of the 4-H Program in Pittsburg County . . . . . . . . . . . . . . . . . . 92
The Development of a Pennsylvania 4-H Wildlife Conservation Leader's Guide Using Task Sheets . . . 93
Development of a 4-H Hydroponics Project . . . . . . . 94
Impact of 4-H Activities in Leadership, Personal, Technical Skills, Social and Value Development . . . 95
4-H Camping: Does It Develop Life Skills? . . . . . . 96
A Guide for the Planning, Implementation and Evaluation of 4-H Camp Counselor Training . . . . . 97
Development of a Soils Curriculum for the 4-H Challenge Natural Resources Project . . . . . . . . . 98
Problems that Hamper Success of County 4-H Programs . . . . . . . . . . . . . . . . . . . . . . . 99
Career Education in 4-H Projects . . . . . . . . . . . 100
Strengthening Leadership in Wyoming 4-H Community Clubs . . . . . . . . . . . . . . . . . . . . . . . . 101
Perceptions of Benefits Derived by Individuals Participating in Wyoming 4-H Programs . . . . . . . 102

HOME ECONOMICS . . . . . . . . . . . . . . . . . . . . . . . 103
The Effectiveness of the Parent Education Program of the Alabama Cooperative Extension Service in Reducing Incidence of Child Abuse and Neglect . . . 105
Instant Health Info: The Telephone Connection . . . . 106

Serving the Rural Community: What Types of Promotion Work . . . . . . . . . . . . . . . . . . . . 107
A Comparative Study of Two Curricula Designs in the Georgia Expanded Food and Nutrition Education Program . . . . . . . . . . . . . . . . . . . . . . . 108
An Evaluation of a Low Cost/No Cost Residential Self-Help Energy Conservation Program . . . . . . . 109
A Demographic Profile and Selected Energy Conservation Practices of the University of Hawaii's Extension Homemakers' Clientele . . . . . . 110
Factors in the Life Patterns of Paraprofessionals: EFNEP Aides in New York State . . . . . . . . . . . 111
Origins of Extension Home Economics Programs . . . . . 112
The Elementary Level Food and Fitness Curriculum of the Louisiana Cooperative Extension Service: Program Effectiveness and Management . . . . . . . . 113
Associations Between Previous Treatments for Alcohol Addictions and Chances for Success at O'Brien Halfway House, Inc., Baton Rouge, Louisiana . . . . . . . . . . . . . . . . . . . . . . 114
A Study of the Home Gardening Habits of Limited Resource Families Enrolled in the Expanded Foods and Nutrition Education Program in Evangeline Parish, Louisiana, 1983 . . . . . . . . . . 115
Economic Consequences of Household-Produced Goods and Services . . . . . . . . . . . . . . . . . . 116
The Effectiveness of Mututal Support Groups for Families with a Disabled Member . . . . . . . . . . 117
Families of the Chronically Ill or Handicapped: Do Siblings Differ in Self-Esteem? . . . . . . . . . 118
Families with Chronically Ill and Handicapped Children and Nonaffected Children: Self-Esteem, Stressful Life Events, Family Role Expectations and Family Relationships . . . . . . . 119
Parental Expectations for Early Adolescence: Cultural vs. Interpersonal . . . . . . . . . . . . . 120
Early Adolescents and Their Families: Determinants of Family Well-Being . . . . . . . . . . . . . . . . . 121
Early Adolescents: Developing Technical and Interpersonal Skills in the Family and Community . . 122
Examining New Families' Concerns About Their Early Adolescents: Implications for Parent Education Programming . . . . . . . . . . . . . . . . . . . . 123
Effects of Parental Employment Types on Attitudes Toward Parental Employment . . . . . . . . . . . . 124
Toward an Ecology of Early Adolescent Sex Role Development: Attitudes and Behaviors . . . . . . . 125
Factors Related to the Process of Political Socialization of Home Economists in Missouri . . . . 126
Critical Factors Affecting Consumer Satisfaction with the Home Remodeling Process . . . . . . . . . . 127
The Effectiveness of the Leader Training Lesson, 'Take the Stain and Pain Out of Laundry' . . . . . . 128

The Effects of Discussion Time and Public Commitment on Changing Mothers' Child Feeding Practices . . . . . . . . . . . . . . . . . . 129
Implementation of an Education Pest Management Program for Public Housing Authorities and Economically Disadvantaged Oklahomans in Public Housing . . . . . . . . . . . . . . . . . . . . . 130
Economic Impact of Energy Education for Limited Resource Households . . . . . . . . . . . . 131
Economic Impact of Energy Education for Limited Resource Households . . . . . . . . . . . . 132
Factors Related to Estate Planning Knowledge and Estate Planning Actions of Married Individuals . . . . . . . . . . . . . . . . . . . . . . 133
Selected Clothing Practices of Extension Homemakers . . . . . . . . . . . . . . . . . . . . . . 134
The Development of a Program for Microwave Oven Users . . . . . . . . . . . . . . . . . . . . . . 135
Factors that Motivate Young Adults to Study Etiquette . . . . . . . . . . . . . . . . . . . . . . 136
Virginia Extension Homemakers Future Study . . . . . . . 137
Iron Intake of EFNEP Homemakers and Factors Influencing Dietary Change . . . . . . . . . . . . . 138
Patterns of In-Home Care Service Use Among Older Adults: A Rural-Urban Comparison . . . . . . . . . 139
Using the Mail to Teach Consumers About Using Microwave Ovens . . . . . . . . . . . . . . . . . . 140
The Relationship Among Learning Projects Reported by Mother of Young Children in Dual-Earner Couples, Family Life Events, and Well-Being . . . . . . . . . . . . . . . . . . . . 141
Results of a Survey of Tomatoes Home Canned In Wyoming . . . . . . . . . . . . . . . . . . . . . 142
Comparison of Displaced Homemaker Needs with Programs . . . . . . . . . . . . . . . . . . . . . . 143

INTERNATIONAL . . . . . . . . . . . . . . . . . . . . . . . . 145
A Proposal For the Social Analysis of Needs and Problems in an Agricultural Community in Panama: Tole Cabecera . . . . . . . . . . . . . . 147
Academic, Environmental and Occupational Factors Influencing the Role of International Students in Their Countries' Agricultural Development Process . . . . . . . . . . . . . . . . 148
Adoption of Agricultural Innovations in a Malay Farming Community . . . . . . . . . . . . . . . . . 149
Inservice Training Needs of Agricultural Extension Agents in Kiambu District, Kenya . . . . . . . . . . 150
A Needs Assessment of the Inservice Training Program for Agricultural Extension Advisors in Taiwan . . . . . . . . . . . . . . . . . . . . . 151
Teaching Competencies Needed by Extension Workers in Transferring New Agricultural Technologies to Farmers in Malaysia . . . . . . . . . . . . . . . 152

Characteristics and Needs of Farmers in Sixteen Universities Pertanian Malaysia Sarawak Extension Villages and Their Implications to Extension Program Planning . . . . . . . . . . . . . 153
Application of Farming Systems Research and Extension Approach in the Improvement of Agricultural Production in Sierra Leone . . . . . . 154
Crop Production Activities Performed by Farmers and Agricultural Extension Workers in Qasim, Saudi Arabia . . . . . . . . . . . . . . . . . . . . 155
Potential Teaching Strategies for Adult Education in Burma . . . . . . . . . . . . . . . . . . . . . 156
Analysis of the Agricultural Competencies Needed by the Farmers in Al-Hassa Oasis in Saudia Arabia . . . . . . . . . . . . . . . . . . . . . . 157
The Professional Competencies Needed by Agricultural Extension Agents in Bendel State of Nigeria . . . . . . . . . . . . . . . . . . 158
Communication Effectiveness Between Commune Extension Agents and Rice Farmers in Chiang Mai, Thailand . . . . . . . . . . . . . . . 159
Assessment of Professional Competencies Needed by Extension Agents in Developing Countries: Case Study in Swaziland . . . . . . . . . . . . . . 160
Guidelines to Identify Priorities in Agricultural Research in Production Farming for the Small Farmer in Swaziland . . . . . . . . . . . . . . . . 161
Procedures for Changing Farmers' Attitudes Toward Soil Conservation in Commercial Farming Areas in Zimbabwe: A Historical Case Study . . . . . . . 162
The Professional Competencies Needed by Intermediate Agricultural Extension Personnel in the Kenya Agricultural Extension Service . . . . . . . . . . . 163
The Development of a Manual for Training Rural Development Leaders in Sri Lanka . . . . . . . . . 164
The Identification of Focal Individuals and the Analysis of Communication Networks in Four Sri Lankan Villages . . . . . . . . . . . . . . . . 165
Guidelines for Land Distribution in Saudi Arabia . . . 166
A University Curriculum for the Academic Development of Adult Educators Working to Improve Bolivian Agriculture . . . . . . . . . . . . 167
Development of a 4-H Type Leader Training Model for Nonformal Education in Bangladesh . . . . . . . 168
Problems Perceived by Field Extension Workers in Conducting Training and Visit System in South Sulawesi, Indonesia . . . . . . . . . . . . . . . . 169
Effectiveness of Visits to Farmers' Groups Under the Training and Visit System of Extension in Sri Lanka as Perceived by Village Extension Workers . . . . . . . . . . . . . . . . . . . . . . 170
The Effectiveness of Radio Agricultural Programs in Promoting Development as Perceived by Progressive Farmers in the Northern Division of Fiji Islands . . 171

PERSONNEL/STAFF DEVELOPMENT . . . . . . . . . . . . . . . . . 173
Career Appearance of Male Agents in the Alabama Cooperative Extension Service: Significance for the Agents, Their Supervisors, and Clientele . . 175
Extension Advisors' Perceptions of Their Jobs and Their Need for Additional Training in Relation to Duties and Demographic Characteristics . . . . . 176
Choice of Extension Education Curricula as Determined by Selected Cooperative Extension Service Agents . . . . . . . . . . . . . . . . . . . 177
The Relationship Between Readiness for, and Involvement in Self-Directed Learning . . . . . . . 178
A Comparison of Assistance Used by Field-Dependent and Field-Independent Adults Engaged in Self-Planned Learning . . . . . . . . . . . . . . . . . . 179
Perceptions of Nine Change Agent Roles and Related Work Variables by County Extension Agents in the Minnesota Agricultural Extension Service -- 1985 . . 180
A Study of the Curriculum and a Follow-Up of Graduates of the Agricultural Education Program at the University of Maryland, College Park, 1949-1982 . . . . . . . . . . . . . . . . . . . . . 181
A Study of the Extension Training Needed as Perceived by Former Extension Professionals Currently Studying in the United States . . . . . . 182
Plus Two Score: The Cooperative Extension Service in Michigan 1940 to 1980 . . . . . . . . . . . . . 183
Self Administered Job Preview Exercises . . . . . . . . 184
The Interrelationships Between Leadership Style, Locus of Control, and Other Selected Characteristics of County Extension Leaders Within the Mississippi Cooperative Extension Service . . . . . . . . . . . 185
A Comparison of Two Instructional Methods for Teaching Microcomputer Competencies to Extension Personnel in Mississippi . . . . . . . . . . 186
The Relationship of Locus of Control and Other Selected Variables to the Ratings of Job Performance of Extension Home Economics Agents in Mississippi . . . . . . . . . . . . . . . . . . . 187
The Equivalency of Selected Junior College and University Introductory Courses in Agriculture . . . 188
A Study to Determine the Attitudes, Self-Perceived Training Needs, and Experience of Alabama County Extension Agents in the Use of Microcomputers . . . 189
An Analysis of the Self-Perceived In-Service Training Needs of Mississippi Extension Home Economists . . . . . . . . . . . . . . . . . . . . . 190
Development of an Affirmative Action Inventory . . . . 191
Self-Concept and Participation Training . . . . . . . . 192
Orientation, Job Satisfaction, and Job Performance of New Extension Personnel in Missouri . . . . . . . 193
Cable Television: A Method for Delivering Information . . . . . . . . . . . . . . . . . . . . 194

Methods of Coping with Work Force Role Conflict In Relation to Job Satisfaction of Cooperative Extension Home Economists . . . . . . . . . . . . . . 195
Job Satisfaction of County Extension Agents and the Relationship of Agents' Perception of Supervision and Leader Behavior of County Extension Chairmen in North Carolina . . . . . . . . . . . . . . . . . . 196
An Analysis of Socio-Demographic Factors Influencing The Career Aspirations of The North Carolina Agricultural Extension Professional Females In Pursuing a County Chairman Position . . . . . . . . . 197
Selected Characteristics of On-The-Job Learning Episodes and Their Relation to Formal Training in Developing Supervisory Concepts and Practices . . 198
Factors Associated with Burnout Among Extension Agents in The Ohio Cooperative Extension Service . . 199
An Evaluation of the Performance Appraisal System Used by The Ohio Cooperative Extension Service . . . 200
Professional Competencies Needed by Extension Employees in Urban Counties of Ohio . . . . . . . . 201
Factors Associated with the Turnover Intentions of Ohio Cooperative Extension County Agents . . . . 202
Critical Elements of the State Extension Specialist Position . . . . . . . . . . . . . . . . . . . . . . . 203
Perceptions of Oklahoma Cooperative Extension Personnel Regarding Their Use of Electronic Technology in Disseminating Extension Education Information . . . . . . . . . . . . . . . . . . . . 204
First-Year Administrative In-Service Training Needs as Perceived by County Extension Directors in Oklahoma . . . . . . . . . . . . . . . . . . . . . . 205
Determining the Presence of Bias in the Agent Performance Appraisal System of the Texas Agricultural Extension Service . . . . . . . . . . . 206
Guidelines to Plan Washington State Cooperative Extension Programs Utilizing Videotape and Audio Conferencing . . . . . . . . . . . . . . . . . 207
Development of an Orientation to Washington State Government for New Extension Faculty . . . . . . . . 208
Perceived Problems of Newly Employed County Agricultural Extension Agents . . . . . . . . . . . . 209

VOLUNTEERISM . . . . . . . . . . . . . . . . . . . . . . . . 211
Correlations Between Community Leaders and Voluntary Association Members Role Perceptions of the Cooperative Extension Service . . . . . . . . . 213
Four-H Organization Leaders -- The Association Between Task Performance and Support Received . . . 214
A 1985 Examination of the Volunteer Master Gardener Program in Maryland; With Indepth Examinations of the Programs in Three Selected Counties . . . . . 215
An Annotated Bibliography of Selected Materials in the Area of Volunteerism . . . . . . . . . . . . . 216

An Analysis of 4-H Volunteer Expectancies and Outcomes in Relation to Motivation and Turnover . . 217
Ohio 4-H Agents' and Volunteer Leaders' Perceptions of the Volunteer Leadership Development Program . . . . . . . . . . . . . . . . 218
Perceptions of the Effectiveness of 4-H Volunteer Key Leaders as Held by Key Leaders and County 4-H Agents in Ohio . . . . . . . 219
Evaluation of Volunteer Leadership Development Workshops-Effects of Participation in the Planning Process . . . . . . . . . . . . . . . . . . 220
Wife/Mother Role Adjustments and Other Managerial Strategies Related to a Community Leadership Volunteer Demand . . . . . . . . . . . . . . . . . 221
The Impact of Self-Persuasion Communication, Leadership, Involvement, and Role Differences on Commitment and Job Performance in Volunteer Extension Advisory Councils: A Path and Experimental Analysis . . . . . . . . . . . . . . 222
Regional Extension Advisory Boards: Their Perceived Effectiveness . . . . . . . . . . . . . 223
Guidelines for Training 4-H Adult Volunteer Leaders in Washington State Cooperative Extension . . . . . . . . . . . . . . . . . . . . 224

AUTHOR INDEX . . . . . . . . . . . . . . . . . . . . . . 225

STATE INDEX . . . . . . . . . . . . . . . . . . . . . . 233

# ABOUT THIS PUBLICATION

The purpose of the second edition of Summary of Research in Extension is to provide a linkage between producers and consumers of research related to the Cooperative Extension Service. The abstracts presented in this publication should enhance Extension research efforts. It is pointed out that the research was carried out by many individuals in a variety of situations. Further, the Cooperative Extension Service has not endorsed this publication or the research reported. No Extension funds have been used in producing it.

The abstracts are organized into nine broad categories: administration, agriculture/natural resources, accountability and evaluation, community resource development, 4-H and youth, home economics, international, personnel and staff development, and volunteerism. Each abstract was reviewed and placed in the appropriate category. Abstracts of studies that could be placed in more than one area are listed only once in the category deemed most appropriate.

Abstracts are alphabetically listed in each of the nine categories by state and by names of principal investigators within states. Indexes are also provided by author and state in the back of this publication.

Suggestions from individuals who use this publication would be welcomed and should be sent to the Department of Agricultural and Extension Education, P. O. Drawer AV, Mississippi State, MS 39762.

# ADMINISTRATION

## MICHIGAN

HARRISON, William A. "An Analysis of the County Extension Director's Administration Role In Michigan". Dissertation for the Degree of Ph.D., 1984, Michigan State University, East Lansing.

Purpose. The general purposes of this study were: (1) to define the role of the county Extension director in Michigan as viewed by county Extension director, other extension workers, and county government Cooperative Extension Service contract persons; (2) to obtain information to help Extension personnel gain a better understanding of the relationship between the selected study groups; and (3) to provide Michigan Extension administrators with additional information on which to base performance evaluation.

Method. The data were obtained from a mailed questionnaire returned by 171 Michigan Extension workers and 48 county government Cooperative Extension Service contact persons on the job in April 1983. The questionnaire provided opportunity for the respondents to record their judgment concerning the extent to which 172 possible role-definition items were a part of the job of a county Extension director. The questionnaire was similar to the one used by Caul (1960) but with additional items to reflect contemporary issues and social responsibilities that the Cooperative Extension Service has in the 1980's.

Findings. All administrative processes studied were important, but emphasis was placed on the county Extension director's function in the following order: (1) business management and finance, (2) educational leadership, (3) organization and policy, (4) direction and coordination, (5) planning and programming, (6) administrative selections, (7) personnel management and (8) supervision. The rankings reported in this study were not different from the Caul study (1960). County Extension directors viewed their administrative role differently than did county Extension agents and state Extension administrators. These differences were observed in three administrative processes with county Extension agents and in four administrative areas with state Extension adminstrators. Age, staff size, Extension experience, formal education, or time spent on administration did not change the county Extension director's view of their administrative role.

Information. For additional information, contact: William A. Harrison, Ph.D., County Extension Director, Kent County, 836 Fuller N.E., Grand Rapids, MI 49503, Telephone: (616) 774-3265.

MISSOURI

SHAVER, J. C. "Role Stress Resulting from Role Conflict and Ambiguity Related to Organizational Change." Ph.D. Dissertation, 1985, University of Missouri, Columbia.

Purpose. This study was designed to provide further insight into role stress in organizations. The specific intent was to ascertain whether structural changes within an organization could be associated with role stress felt by staff in those parts of the organization which had undergone change.

Method. The sample consisted of all Missouri Cooperative Extension Service field staff employed as of late July, 1985. These staff members were assigned to groups depending upon the amount and recency of change they had experienced. These groups were labeled no change, recent change, and long term change. The respondents completed a questionnaire that included a forty-five item Role Stress Index and a brief Supplemental Information Sheet.

A factor analysis was conducted on the role stress instrument data, resulting in five retained factors. These factors were assigned the following labels; 1) role ambiguity 2) role overload 3) person-role conflict 4) superior/subordinate communications and 5) competent self.

A MANOVA was used to test for differences among groups in the five factors. Five ANOVA'S followed to determine if there were differences among groups for each factor.

Findings: The long term change group had significantly higher role overload and person-role conflict scores than did either of the other groups. The superior/subordinate communications factor was significantly larger for the long term change group than for the recent change group.

These findings support the following conclusions; 1) role stress is multifaceted, 2) there is a sub-component of role ambiguity related to superior subordinate communications that becomes important when organizational structure makes effective communications difficult, 3) perceptions of role overload are greater with a long term change than with a recent change or no change, 4) person-role conflict is also greater with long term change, and 5) the superior/subordinate communications aspect of role stress was significantly greater with long term change than with recent change. In addition, there appeared to be an incubation period following change necessary for increased role overload and person-role conflict perceptions to develop.

Information. For additional information, contact: J. C. Shaver, Regional Director, University Extension, 822 Clark Hall, Columbia, Missouri 65211, Telephone: (314) 882-2695.

## NORTH CAROLINA

LYDAY, Susan Y. "An Examination of Selected Factors Associated with Attitudes of Extension Professionals Toward Women in Management." Doctoral Dissertation, Department of Adult and Community College Education, 1985, North Carolina State University, Raleigh.

Purpose. The primary purpose was to describe the attitudes of Extension professionals toward the progression of women in management. A secondary purpose was to investigate the role that attributions play in mediating the relationships between the attitudes and selected independent factors. Reviews of the literature gave direction to the model which introduces categories of selected factors potentially related to the attitudes of Extension professionals toward women managers. The socio-demographic factors were: age, gender, education, marital status, and number of dependents. The organizational factors were: position, tenure in position, geographical location, gender of supervisor and whether or not one has been supervised by a woman. The career experience factors were: Extension experience, field of professional training, management training/experience and other career experiences.

Method. A survey research design was utilized to gather the data from a study sample of 266 Extension professionals in four different job groups. Respondents numbered 231 for a response rate of 87 percent. An instrument with a five point Likert type scale consisting of 68 statements and selected demographics was used to elicit responses from those in the sample.

Findings. The results indicated that female North Carolina Extension professionals held more favorable attitudes toward women managers. Older and married Extension professionals held more unfavorable attitudes toward the performance of women managers. Extension professionals with the highest educational attainments held more positive attitudes toward women entering management. The experience of being supervised by a woman was characteristic of those respondents who held more favorable attitudes toward women in management. Extension professionals with more favorable attitudes attributed psychological factors such as ability, effort, luck and task difficulty to the entry, performance and promotion of women in management.

Information. For additional information, contact: Susan Y. Lyday, Extension Personnel Development Specialist, Box 7602, North Carolina State University, Raleigh, North Carolina 27695-7602.

## NORTH CAROLINA

MOCK, Judieth E. "An Analysis of Positional Involvement of The State Home Economics Administrator in Policy Decision-Making In State Cooperative Extension Organizations." Thesis, Doctor of Education, 1982, North Carolina State University, Raleigh.

Purpose. The purpose was to examine the actual involvement and the ideal involvement in policy decision-making by state Extension Home Economics Administrators, the gap between actual and ideal involvement, and the association of these measures with selected variables in state Extension Service organizations. The relationships of the structural characteristics of hierarchical level of the Home Economics Administrator position, span of control, membership in Administrative Council, size and parameters of position to involvement in decision-making were examined. The relationships of age and tenure to involvement in decision-making were examined. Differences in perceived involvement among various position groups were also analyzed.

Method. A total of 31 Extension Directors, 31 Home Economics Administrators, and 170 Administrative Council members representing 31 states responded to a self-administered questionnaire which included 32 decision-making items. These items encompassed decisions concerning long range planning, program development, personnel matters, budgeting, allocation of physical facilities, evaluating and reporting, and relations with the public, and the decision-making process itself.

Statistical procedures employed in analyzing the data were frequency and percentage distributions, means, t-test, analysis of variance, regression analysis, and F values associated with regression coefficients.

Findings. Findings indicated that differences existed between respondents' perceptions of Home Economics Administrators' actual involvement and ideal involvement in all items. Generally, mean involvement gap scores were lowest for Extension Directors' perceptions, and highest for Home Economics Administrators'. All respondents perceived that Home Economics Administrators ideally should be involved in policy decision-making to a greater extent than they actually were involved. Respondents occupying different positions perceived the Home Economics Administrator's actual involvement in decision-making differently, and perceived ideal involvement in decision-making differently.

Information. For additional information, contact: Judieth E. Mock, Specialist-In-Charge, Human Environment, Box 7605, North Carolina State University, Raleigh, N. C. 27695-7605.

CLARK, Richard W. "Burnout and Associated Factors Among Administrators/Mid-Managers of the Cooperative Extension Service in the North Central Region." Ph.D. Dissertation, 1985, The Ohio State University, Columbus.

Purpose. The purpose was to determine the level of burnout and the relationship between burnout and job satisfaction, occupational stress, personal strain, personal coping resources, and selected personal characteristics associated with associate directors, assistant directors, and district supervisors of the Cooperative Extension Service in the North Central Region of the United States.

Method. Questionnaires were mailed to 19 associate directors, 36 assistant directors, and 67 district supervisors representing a census of persons in the North Central Region, except for Nebraska which declined to participate in the study. A 100% return was achieved. The instrument measured the following variables: job satisfaction, occupational stress, personal strain, personal resources for coping, burnout, and selected demographic characteristics. Based on respondent ratings, data were summarized to provide means, standard deviations, and frequencies. Population correlations were computed to describe the strength and direction of the relationship between variables. Differences between the job categories for the variables of interest were analyzed by comparing population means, percentages, and frequencies.

Findings. A low-to-moderate level of burnout was present among administrators/mid-managers of the Cooperative Extension Service in the North Central Region. Approximately 20 percent of the district supervisors and assistant directors experienced high levels of burnout (emotional exhaustion). Approximately 30 percent of the associate directors experienced high depersonalization scores.

Low-to-moderate negative relationships were found between job satisfaction and burnout while moderate to substantial positive relationships were indicated between occupational stress and burnout. A moderate to very strong positive relationshop existed between personal strain and burnout. A low-to-moderate negative relationship was found between personal coping and burnout.

Information. For additional information, contact: Dr. Richard W. Clark, Assistant Professor, The Pennsylvania State University, Department of Agricultural and Extension Education, Armsby Building, University Park, Pennsylvania 16802, Telephone: (814) 865-1688 or Dr. L. H. Newcomb, Professor, The Ohio State University, 2120 Fyffe Road, 208 Agricultural Administration Building, Columbus, Ohio 43210, Telephone: (614) 422-6321.

# AGRICULTURE/ NATURAL RESOURCES

## CALIFORNIA

DEWEES, Christopher M. "Technical Innovation in the Pacific Coast Commercial Trawling and Salmon Trolling Fisheries." Dissertation, Doctor of Philosophy, 1985, University of California, Davis.

Purpose. The purposes were to gain insight into the innovation process in commercial fisheries, test a new model of innovation adoption/non-adoption, and develop recommendations for applying the results within Cooperative Extension.

Method. Personal interviews (23-page questionnaire) were conducted with 83 randomly-selected trawlers located between Newport, Oregon, and Santa Barbara, California, during February through April, 1984. Questionnaires (8-page) were mailed to a random sample of 1500 licensed California salmon trollers in April, 1984, with a 33-percent return rate (494 responses). Descriptive statistics, factor analysis, and logistic regression were the primary statistical methods used to analyze the survey data. Logistic regression was used to test an innovation adoption/non-adoption model which included fishermen's personal characteristics and situation, their attitudes about fishing, and their perceptions of each innovation's attributes. Innovations studied included both fish catching technology and safety equipment.

Findings. The findings generally support conceptual issues raised by Downs and Mohr (1976). A different subset of variables explained the adoption of each innovation, apparently due to the innovation-by-innovation differences in the match between the potential adopter and the innovation. Both the characteristics of the potential adopters and characteristics of the innovations were important determinants of adoption/non-adoption.

Implications of the findings for Cooperative Extension include: (1) It is important to use interpersonal networks and trade journals to diffuse information about innovations. (2) Different Extension strategies may be needed for each innovation. (3) Information on perceived attributes of innovations could be used to lessen barriers to adoption. (4) Extension professionals should devote more effort to understanding non-adopters. (5) Extension professionals need to consider all possible consequences of innovations before encouraging their adoption (especially in a common property resource situation).

Information. Christopher M. Dewees, Marine Fisheries Specialist, Extension Sea Grant, University of California, Davis, CA 95616 [916] 752-1497.

# FLORIDA

BRADSHAW, Joan P. "Determination of the Need for Extension Horticultural Education for Garden Center Employees." Master of Science Thesis, 1985, University of Florida, Gainesville.

Purpose. The central purpose of the study was to determine the need for Extension horticultural education programs for garden center employees based upon the perceptions of garden center personnel in Volusia County, Florida. To achieve this purpose, seven objectives were developed.

Method: Data were collected by conducting on-site interviews. Of the ninety-six garden center personnel included in the sample, responses were collected from 79 personnel (82.3%). Analyses of data included: frequencies, means, percents and mean rankings. T-tests were calculated for variables to determine if overall means for responses were different.

Findings: The major findings of the study were:

1. Approximately half of the garden center personnel had no previous horticultural work experience or training prior to their employment with their present garden center.
2. The types of horticultural information that the public most frequently request of garden center personnel are plant identification and plant selection.
3. Garden center employees perceived they could respond to most customer requests for horticultural information.
4. Managers perceived their employees could respond to most customer requests for horticultural information.
5. There was no difference between garden center employee perceived ability to respond to requests for horticultural information according to the demographic characteristics of sex, previous horticultural work experience and horticultural training.
6. The preferred method of receiving horticultural information was via Extension newsletters.
7. Approximately half of garden center personnel utilized the Cooperative Extension Service at least once in the past year.

Information: For additional information, contact: Joan P. Bradshaw, Extension Agent, 12175 125th North, P. O. Box 1229, Largo, Florida 33540, Telephone: (813) 586.5477.

ABERNATHY, Michael R. "Analysis of Factors Influencing the Adoption of Beef Cattle Management Practices in Georgia Beef Enterprises." Thesis, Master of Agricultural Extension, 1985, University of Georgia, Athens.

Purpose. The purpose was to investigate the personal characteristics and situational factors affecting the adoption of management practices among beef producers in Greene County, Georgia. Specific variables examined were: age of the producers, length of time the producer had been in beef production, level of formal education, formal organization membership, size of production herd, tenure system, and sources of information used in the farm operation.

Method. A questionnaire was mailed to 103 beef producers in Greene County, Georgia. Seventy one percent returned the survey. Personal and situational data were obtained. Descriptive statistics were computed to summarize the data. Pearson Product Moment Correlation Coefficients were calculated to analyze the relationships between the variables. Statistical significance was determined by using the Student's t.

Findings. Descriptive statistics indicated that the average age of this sample of beef producers was 52.6 years. Only 15 percent of the respondents had completed college: and 27 percent had not completed high school. Data on the situational factors revealed that 90 percent of the respondents used natural service for breeding and 10 percent used a combination of natural breeding and artificial insemination. Friends, neighbors, and the Cooperative Extension Service were rated highest for the most important source of information.

Results of the statistical analysis gave evidence that several personal management and source of information factors are associated with the adoption of estrous synchronization, contolled breeding, and implanting. Age and level of education was positively associated with management practices. No management practices (dehorning, castration, etc.) were positively associated with estrous synchronization. However, positive associations were indicated between (1) the management practices of dehorning and castration and (2) the breeding practices of controlled breeding and implanting. Evidence from this study indicated that the beef producers who had adopted management practices were strongly influenced by their formal organizations.

Information. For additional information, contact: Dr. F. Richard Rohs, Department of Extension Education, University of Georgia, Athens, Georgia 30602. Telephone: (404) 542-3151.

IBEZIM, Don O. "Analysis of Factors Influencing the Adoption of Estrus Synchronization in Georgia Beef Enterprises." Thesis, Master of Agricultural Extension, 1984, University of Georgia, Athens.

Purpose. The purpose was to investigate the personal characteristics and situational factors affecting the adoption of estrus synchronization among Georgia beef producers. A secondary objective was to determine the importance of mass media, extension contact, and other sources of information in adopting the estrus synchronization program.

Method. A questionnaire was mailed to 340 beef producers selected from three southwest Georgia Counties. Eighty (24 percent) returned the questionnaire. Personal characteristics and situational factors were the two groupings of independent variables that were measured. Personal characteristics included age, sex, marital status, educational level, lenth of time in beef production and production methods. Situational factors examined were the size of the farm, tenure status, and sources of farm information. Pearson product moment correlation coefficients were calculated to describe and test the statistical hypothesis about the relationships between variables. Statistical significance was determined by using the student's t.

Findings. The results indicated that several personal and situational factors are associated with the adoption of estrus synchronization by Georgia beef producers. Personal factors positively associated with the use of this program were the beef producers's age and marital status. Cow-calf production phases and natural service breeding methods were positively associated with the estrus synchronization program. The study also found that the more formal organizations beef producers belonged to then the more likely they would use the estrus synchronization program.

Information. For additional information, contact: Dr. F. Richard Rohs, Department of Extension Education, Lumpkin House, Cooperative Extension Service, The University of Georgia, Athens, Georgia 30602. Telephone: (404) 542-3151.

## LOUISIANA

CORE, Chic A. "An Analysis of Beef Cattle Marketing in Tangipahoa Parish, Louisiana, 1984." Master of Science Thesis, 1985, Louisiana State University, Baton Rouge.

Purpose. The primary purpose was to determine beef cattle marketing outlets being used by producers, their degree of satisfaction with these outlets, and what types of alternative marketing outlets might interest producers.

Method. One hundred beef cattle producers were randomly selected from an alphabetized beef cattle mailing list maintained in the Tangipahoa Parish Cooperative Extension Service office. All data were collected by means of personal interviews, using an interview schedule.

Data were compiled and analyzed on numbers and kinds of calves and how these calves were marketed expressed as percentages. Data pertaining to the interest level of producers in certain marketing techniques were compared to categories of producers and the chi-square distribution method was used to determine the significance of these relationships.

Findings. There were nearly 3,000 commercial calves marketed by producers in this study. Ninety-one percent of these calves were sold through auction barns and 81 percent weighed between 400 and 700 pounds. It was revealed that the new marketing techniques most likely to be accepted by beef producers would be those that are most like the marketing outlets producers are currently using. Since the majority of producers were using auction barns to sell their cattle, marketing techniques such as special feeder calf sales that would involve an auction barn type sale received more interest from producers than other marketing alternatives. The study also revealed that Extension Service beef marketing programs were effective in stimulating interest in feeder calf sales. Sixty-seven percent of beef producers said they were less than satisfied with the marketing outlets they used in 1984. This would indicate that a majority of producers are aware that they have a marketing problem and would be interested in marketing alternatives that would increase their profits. The study revealed further that special feeder calf sales that involved co-mingling of cattle increased profits for producers. It would appear such feeder calf sales would be the marketing alternative most likely to be adopted by producers in Tangipahoa Parish.

Information. For additional information, contact: Chic Core, Associate County Agent, Tangipahoa Parish, Louisiana Cooperative Extension Service, P.O. Box 848, Amite, Louisiana 70723, Telephone: 504/562-2320.

# LOUISIANA

DOREST, Desiree A. "Marketing Practices of Small Vegetable Producers in St. James Parish." Master of Science Thesis, 1985, Louisiana State University, Baton Rouge.

Purpose. The purpose of the study was to determine the marketing behavior of small commercial vegetable producers in St. James Parish, Louisiana.

Method. All producers were personally interviewed on farming characteristics and marketing practices for the 1984 farm production year.

Findings. The average farmer had been producing vegetables for 30 years, cultivated 11.6 acres, received an average of 14 cents per pound for his produce and had a total average investment of $54,276.

The vegetables grown by the farmers in St. James Parish were the same type of vegetables grown in South Louisiana. The major vegetables grown were mustard, on an average acreage of 5.3 acres, and cabbage, on an average of 11 acres.

With regard to marketing practices, over one-half of the farmers did not have a vegetable marketing plan, although they considered customers' and buyers' needs and desires. A large number of farmers marketed their vegetables independently and were influenced mostly by market bulletins on how to market their vegetables.

The major marketing problems that small vegetable farmers encountered were 1) poor market outlets, 2) low prices, and 3) underselling by competition and speculators.

A majority of the vegetables were sold through roadside markets and wholesalers.

The packaging methods used by the farmers were boxing, sacking, and wrapping. The major transportation method was trucks operated by farmers, buyers, or hired labor.

Information. For additional information, contact: Desiree A. Dorest, Associate County Agent, St. James Parish, Courthouse, P.O. Box 64, Convent, Louisiana 70723, Telephone: 504/562-2320.

## LOUISIANA

FUNDERBURG, Eddie. "An Analysis of Farmers' Soil Testing Practices in Three Louisiana Parishes." Doctor of Education Dissertation, 1984, Louisiana State University, Baton Rouge.

Purpose. The purpose was to analyze selected clientele of the Louisiana State University soil testing laboratory.

Method. The sample consisted of one hundred farmers of agronomic crops in Franklin, Morehouse, and Tensas parishes who had soil tested within the past three years. The farmers were personally interviewed by the researcher.

The statistical tests used were the analysis of variance test, the simple correlation test, and the Smirnov test. For purposes of this study, the .20 level of probability was considered significant and the .05 level of probability was considered highly significant.

Findings. It was revealed that the average farmer in this study tested his soil every 3.88 years. The average farmer was 48 years old, white, male, and attended 2.5 Extension or research meetings per year. Ninety-three percent of the farmers interviewed stated that their reason for soil testing was to obtain fertilizer and lime recommendations, while only 7 percent stated that the only reason they soil tested their land was to become eligible for crop insurance. Younger and better educated farmers soil tested more often than did older and less educated farmers. Farmers who had been active in 4-H or FFA soil tested more often than did farmers who had not been active in these organizations. There was no relationship between a farmer's knowledge of soil fertility and his frequency of soil testing. Farmers who soil tested more often averaged higher yields of both soybeans and cotton than did farmers who soil tested less often. The differences in yield cannot be solely attributed to frequency of soil testing, however. Eighty-two percent of the farmers interviewed said that the county agent had some or much influence in their fertilization decisions. Most farmers knew the rudiments of taking a representative soil sample, and were pleased with the service they had received from the L.S.U. soil testing laboratory.

Information. For additional information, contact: Eddie Funderburg, 5446 Mississippi State University, Mississippi State, Mississippi 39762, Telephone: 601/325-3036

## LOUISIANA

JOFFRION, Bennett B. "The Relationship Between Crawfish Production Practices in Terrebonne Parish and Yield." Master of Science Thesis, 1984, Louisiana State University, Baton Rouge.

Purpose. The purpose was to identify and evaluate the relationship between recommended production practices of crawfish farmers in Terrebonne Parish and how they affect yield.

Method. Data were obtained by personal interviews with 50 crawfish producers of Terrebonne Parish. Recommended production practices were compared to average yield per acre and total yield.

Findings. There were found to be statistically significant differences in average yield per acre at the .05 level of significance with regard to the following: use of baffle levees, baffle levee spacing, pumping capacity, pumping rate, days to flood pond, stocking rate, date of reflooding, use of aeration device, number of times flushed, traps per acre, trap material, L.S.U. as a source of information, attendance at L.S.U. production meetings, phone and home visits and pond visits. With regard to marketing, negative correlations existed between retail, wholesale and processors.

For total yield, the .05 level of significance was reached for the following: aeration device, L.S.U. as a source of information, attendance at L.S.U. production meetings and phone or visits to agent's office. A negative correlation existed for the retail marketing channel and was statistically significant. A positive correlation existed for the wholesale end but was not statistically significant.

The average size of operation was 24 acres and the average yield per acre was 884 pounds. Total yield ranged from 300 pounds to 160,000 pounds with the mean being 21,567 pounds.

Due to the increase in acreage, demand for crawfish has increased. Crawfish farmers will have to continuously strive for higher yields and maximum production. Because of this, awareness and adoption of recommended production practices which could increase production and yield per acre are of great importance to the farmer.

Information. For additional information, contact: Barton B. Joffrion, Jr., County Agent, Terrebonne Parish, Louisiana Cooperative Extension Service, Box 627, Houma, Louisiana 70361, Telephone: 504/873-6495.

## LOUISIANA

MARTIN, Matt A. "A Study of Soybean Production Practices and Yields in Allen Parish Louisiana, 1983." Master of Science Thesis, 1984, Louisiana State University, Baton Rouge.

Purpose. The major purposes were to identify the soybean production practices used by producers in Allen Parish, and to determine the association between the use of these practices and average yield per acre.

Method. Data were obtained by personal interviews with 75 soybean producers in Allen Parish. For purposes of analysis, yield of soybeans per acre was compared to selected production practices, and social and economic characteristics. Comparisons were made of production practices used on producers' highest yielding field and their lowest yielding field.

Findings. There were found to be statistically significant differences that were positively associated with average bushels per acre at the .20 level of probability with regard to the following: land leveling, drainage of bean land, fungicide seed treatment, molybdenum seed treatment, bacteria inoculate seed treatment, use of post-emergence herbicides, application of insecticides, crop rotation, liming recommendation followed, irrigation facilities, time of seedbed preparation, planting method (rows or drilled), planting dates, variety of seed planted and type of weed control.

It was found that most of the soybean producers were using some of the recommended production practices, but not all.

Producers whose average yield per acre was the same as the parish average (25.1 bushels) or below were generally less likely to be using all or most of the recommended production practices. However, differences observed for some production practices recommended were not all statistically significant at the .20 level of probability.

This study generally tended to support the findings of other studies; that soybean producers who adopt recommended production practices produce higher yields.

Information. For additional information, contact: Matt A. Martin, Jr., Associate County Agent, Allen Parish, Louisiana Cooperative Extension Service, Oberlin, Louisiana 70655, Telephone: 318/639-4376.

## LOUISIANA

SCHAFER, Stephen R. "Factors Affecting Farm Safety Practices of Farmers." Master of Science Thesis, 1985, Louisiana State University, Baton Rouge.

Purpose. The major focus was to identify and evaluate Beauregard Parish farmers' safety practices and to determine if relationships existed between the safety practices and selected personal characteristics and farming situations.

Method. Data were obtained by personal interviews with 154 Beauregard Parish farmers who were farming in 1983-84.

Findings. Farmer income (over $33,000) and acreage (over 175 acres) were found to be statistically significant predictors of the farm safety practices used by farmers.

A positive correlation was found between the farmer's own feelings concerning his knowledge and usage of recommended farm safety practices and the actual use of these safety practices.

Farmer participation in a farm safety program demonstrated a very positive effect on the usage of recommended farm safety practices. The safety index score mean for farmers who had attended a farm safety program was significantly higher than the mean score of farmers who had not attended.

In order to meet the needs of the farmer, the Extension Service, farm safety organizations, and other farm safety professionals should direct their efforts to those farmers and farming situations exhibiting lower use of farm safety practices. They should also continue to emphasize the use of farm safety practices for all farmers.

Information. For additional information, contact: Stephen R. Schafer, Associate County Agent, Beauregard Parish, Louisiana Cooperative Extension Service, P.O. Drawer 609, DeRidder, Louisiana 70634, Telephone: 318/463-7006.

WEISGERBER, Cleveland F. "A Study of Management Practices of Horse Owners in Vernon Parish." Master of Science Thesis, 1984, Louisiana State University, Baton Rouge.

Purpose. The purpose was to identify horse management practices of horse owners in Vernon Parish, and to determine the association of these practices with the purpose of owning a horse.

Method. Information was obtained by personally interviewing a list random sample of 96 horse owners.

The chi-square test was applied to determine statistically significant associations at the .05 level of probability.

Findings. Most of the registered horses were owned by persons for show or commercial use. It was noted that commercial horse owners were doing the best job of management, followed by the show horse owner. Pleasure horse owners were doing the poorest job of management. The more a person had invested in a horse operation, generally, that person did a better job of management. Practically all horse owners needed to improve management practices in the areas of pasture management and facilities.

Information. For additional information, contact: C.F. Weisgerber, Jr., Associate County Agent, Vernon Parish, Louisiana Cooperative Extension Service, P.O. Box 559, Leesville, Louisiana 71446, Telephone: 318/239-3231.

## MARYLAND

GILLUS, D. L., NELSON, Clifford L. and COOPER, Elmer L. "An Assessment of Present and Future Needs for Workers Having Agricultural Competencies in Carroll and Howard Counties, Maryland." Paper, Master of Science and Staff Study, 1985, University of Maryland, College Park.

Purpose. The purpose of this study was to obtain accurate and comprehensive information on present and projected employment opportunities for jobs in agriculture and agribusiness in Carroll and Howard Counties. Information concerning desirable work attitudes and competencies of agricultural employees was also collected in the study.

Method. The study consisted of two different surveys mailed to either farmers or agribusinesses in Carroll and Howard Counties. A 20% sample of farmers in both counties was randomly selected to be surveyed. All identified agribusinesses in both counties were surveyed and non-returned surveys were followed up with a telephone call or personal visit.

Findings. The 126 agribusinesses and the 104 farm respondents in Howard County reported a total of 1,257 full-time and 284 part-time current agricultural workers in their businesses. Similarly, the 80 agribusinesses and the 28 farm respondents in Howard County reported a total of 757 full-time and 151 part-time current agricultural workers. Seventy-four percent of the Carroll County and 80% of the Howard County agricultural employers indicated that they "sometimes" or "always" hire people with satisfactory knowledge and skills for their businesses.

From the findings of the study it was concluded that there were approximately 5,277 full-time and 2,056 part-time agricultural workers in Carroll County, and 3,337 full-time and 1,076 part-time agricultural workers in Howard County, Maryland in 1984. Thus, it was concluded that the number of full-time and part-time agricultural workers in Carroll County totaled approximately 7,333 and for Howard County, approximately 4,413. Further, projections provided by the respondents in both counties seems to indicate that the number of employees on the farms and in agribusinesses will remain constant or increase slightly over the next five years for 1983 through 1988.

Information. For additional information, contact: Dr. Elmer L. Cooper, Associate Professor, Agricultural and Extension Education, University of Maryland, College Park, Maryland 20742, Telephone: (301) 454-3738.

BROWN, Pamela J. "Farmland Preservation in Westfield, Massachusetts." METLAND research project in cooperation with the Extension Service and the Westfield Farmland Advisory Committee, 1985-1986, University of Massachusetts, Amherst.

Purpose. The purpose was to locate Westfield farmlands which are in danger of development and which should be preserved.

Method. Three separate assessments were made following the procedures outlined in the report of Nancy Prince "Farmland Preservation in the City of Westfield, Massachusetts," and coinciding with APR guidelines. Information was taken from the existing computerized database created by the METLAND team, and from farmer surveys. Modifications to one assessment were made at the suggestion of the committee. The modifications helped suit this assessment more to the city of Westfield and thus made the Composite Valuation more accurate.

Findings. The results of the composite of the three assessments indicated which farm parcels were most likely to be taken first for development. These are the parcels of land that APR might first consider for purchase of development rights and also the parcels which the city should give primary attention to when considering preservation of farmland and preservation alternatives. These parcels were found to be closely related to areas of increasing municipal services such as improved roads, water and sewer lines.

The parcels in the composite valuation were divided into three categories representing the top, middle, and bottom thirds of the farm population in terms of danger of development. Thus, secondary and tertiary levels of attention may be identified. The least pressured areas tend to be found in the north-west corner of the city and where services have not yet reached.

Information. For additional information, contact: Pam Brown, METLAND, Department of Landscape Architecture and Regional Planning, University of Massachusetts, Amherst, Massachusetts 01003, Telephone: (413) 545-0930.

## MASSACHUSETTS

FABOS, Julius Gy., and LINDHULT, Mark S., Principal Investigators; McABEE, III, James L., Research Assistant, (METLAND Research Group). "A Computer-Assisted Forest Resource Assessment Procedure for the Cooperative Extension Service." Masters Project, Master of Landscape Architecture, 1986, University of Massachusetts, Amherst.

Purpose. The purpose of this project was to develop a computer-assisted forest resource assessment procedure for the Cooperative Extension Service in Massachusetts.

Method. A literature review aided the development of the procedure and the two levels of subprocedures coinciding with the two primary objectives. The first dealing with town-wide/regional-scale assessment, and the second focusing on site/parcel-specific assessment (e.g. landownership data, tabular parcel information, etc.). The implementation of the procedure on a computer-aided geographic information system, allows decision-makers to rapidly access a variety of spatial information to aid them in understanding the impacts or benefits of land management policy.

The site chosen for the study was the city of Westfield, Massachusetts (approximately 28,800 acres). Several layers of spatial data (e.g. soils, land use, etc.) are being gathered and digitized, along with the entry of tabular data (gathered through a survey of the pertinent landowners).

Findings. The METLAND Research Team at the University of Massachusetts has established a new hardward configuration for its research facility that includes a SUN Microsystems, Inc. SUN-2/120, one of the new generation of 32-bit microcomputer workstations, capable of networking and allowing the future implementation and usefulness of this research. As computer technology continues to shrink the size of the computer and increase its power, this technology will become more available to rural communities and towns allowing the growth of electronic information networking. This will aid in the increase in participation, and the knowledge of land management activities among communities and agencies that would not normally have this information. It also aids the Cooperative Extension Service in their extension of knowledge and advice to the landowner and community.

Information. For additional information, contact: James L. McAbee, III, Research Assistant, METLAND Department of Landscape Architecture and Regional Planning, Hills North, University of Massachusetts, Amherst, Massachusetts 01003, Telephone: (413) 545-0930.

## NEBRASKA

ROCKWELL, S. K. "Impact of 'Farm and Ranch Report' on Nebraska Farmers and Ranchers Over the Initial Two Years." Staff Study, 1984, University of Nebraska-Lincoln.

Purpose. Two major questions were addressed in the study. They were:

1. What was the impact of the "Farm and Ranch Report" on farmers and ranchers in regard to (a) knowledge gained, (b) attitudes influenced, and (c) practices changed?
2. What were the direct and indirect costs of the program on a per user basis?

Method. Data were collected from Nebraska farmers and ranchers in four stages: (a) a telephone interview in August, 1982 from a random sample of 573 listings in which there were 454 (79%) completed interviews; (b) weekly viewing records throughout the 1983 viewing session--three individuals from a subsample of the August, 1982 telephone interview recorded data on 18 programs; (c) a telephone interview in September, 1983 from a random sample of 532 listings in which there were 371 (70%) completed interviews; and (d) a mail questionnaire in November, 1983 to a subsample from the 1983 telephone interview--data were collected from 106 (81%) of 185 regular viewers, occasional viewers, and nonviewers contacted. Data to record the amount of time staff allotted for the television series were collected weekly throughout the 1983 season from Extension Specialists.

Findings. The number of regular viewers from the farm population in Nebraska doubled from 1982 to 1983 (5.5% to 11.1%). The occasional viewers increased from 12.0% to 16.2%.

The knowledge farmers gained factored into three areas: (a) markets and government or commodity programs; (b) planting, growing, harvesting and storing crops; and (c) livestock production. There were no substantial changes related to attitude as a result of the program. The data reinforced the idea that practice change results from knowledge gained.

The data suggested there may be some advantages for using television as a delivery mode for current production and marketing information. However, television as a delivery mode did not appear to be significantly better than other media sources.

Allowing for a plus or minus 5% error rate, the cost per program per viewer for 1983 ranged between $.63 and $.71. For the average figure of $.66, the direct costs accounted for two-thirds ($.45) of the expense and indirect costs for one-third ($.21).

Information. For additional information, contact: Kay Rockwell, Evaluation Specialist, 216 Agricultural Hall, University of Nebraska-Lincoln 68583-0703, Telephone: (402) 472-3431.

# OHIO

OKENYI, Christopher E. "An Evaluation of the Grain Marketing Program in Mercer County, Ohio." Project, Master of Science, 1984, The Ohio State University, Columbus.

Purpose. The purpose of this study was to assess the understandings and adoption resulting from the program, to determine needed program improvements, and to determine future topics for the program.

Method. A census was conducted of the 80 previous participants in the Grain Marketing Program. A researcher-developed questionnaire was utilized to collect data. It had three parts: (1) information on basic marketing which was taught, (2) information about what was learned and (3) future training needs. Two mailings were utilized as were follow-up telephone calls and home visits to collect completed questionnaires. Sixty-two (77.5%) questionnaires were returned. Interviews were conducted with a random sample of nonrespondents and no differences were detected between the two groups.

Findings. Participants perceived that they were confident that they understood and could use the marketing information taught. Responses varied, of course, with knowing how to calculate cost of production being high with lower items being "How to Use Basic Contracts" and "How to Use Hedging." Adoption results were positive, for example, with "forward contracts" and "delayed price." Least adopted was the use of computers in marketing and rolling a hedge. Results indicated that there was a need for further education on most areas with the consideration of two levels of instruction, i.e., begining and advanced. Most of the skills learned had been adopted in some fashion but even greater knowledge was desired.

Information. For additional information, contact: Larry E. Miller, Department of Agricultural Education, 208 Agricultural Administration Building, 2120 Fyffe Road, The Ohio State University, Columbus, Ohio 43210-1099, Telephone: (614) 422-6672.

CRAYS, Joyce D. "Characteristics of and Management Practices Used by Pennsylvania Sheep Producers." Paper, Master of Education, 1984, The Pennsylvania State University, University Park.

Purpose. The purpose of the study was to develop a survey instrument to collect benchmark sheep producer data. To accomplish this, several objectives were developed and operating procedures were established to guide the progress of the research. Specific objectives of the study were identified by requesting a response to the following questions: (1) What are the major marketing practices used by sheep producers? (2) What agronomic practices are followed by sheep producers? (3) What production economic factors are revelant to the sheep producer? (4) What is the "producer profile" of shepherds in Pennsylvania? (5) What is the enterprise data of sheep flocks in Pennsylvania?

Methods. A mail questionnaire was developed to collect benchmark sheep producer data identifying the following objectives: marketing practices, production economic factors, agronomic practices, and enterprise and producer data. Seven hundred and twenty-five producers in nine Pennsylvania counties were surveyed by conducting three separate mailings which resulted in an 84.0 percent return rate. All data were based on the 1982 calendar year.

Findings. The sheep producer can be characterized by stating that 63.8 percent are between the ages of 36 and 65 years old, 45.2 percent have raised sheep for 10 years or less, and the majority of producers own a commercial flock averaging 33 ewes. Sixty-one percent of the shepherds are employed off the farm.

Overall these results indicate that some specific needs do exist for a progressive sheep Extension educational program. Some of the priority items listed were improved management and agronomy and marketing practices. Small flocks managed by part-time producers account for the greatest proportion of the state's sheep enterprises and are in greatest need of an educational program. Extensive use of newsletters, special publications, demonstrational research, and Extension type meetings appear to be an effective means of informing and educating the Pennsylvania sheep producer so that he may become a more efficient producer of lamb and wool.

Information. For additional information, contact: Anne Heinsohn, Department of Agricultural and Extension Education, The Pennsylvania State University, University Park, PA 16802, Telephone: (814) 863-0378.

# PENNSYLVANIA

FOWLER, Donald P. "The Planning, Implementation and Evaluation of an Inservice Training Program in Dairy Udder Health." Paper, Master of Education, 1984, The Pennsylvania State University, University Park.

Purpose. The purpose of this study was to develop a comprehensive educational mastitis program that county extension agents and selected veterinarians could present to dairy farmers throughout the state and thus reduce the demand on specialists time and increase the number of dairymen who could be reached with information about mastitis. The specific objectives were: (1) to prepare visual aids and assemble written materials that could assist extension specialists in training county agents and veterinarians to present a mastitis control program to dairy farmers; and (2) to evaluate the effectiveness of training county agents and veterinarians, using these materials, to conduct an educational mastitis program for dairy farmers.

Method. A two group pretest-posttest design was used in this study. The tests were given to twenty (20) county agents and veternarians who participated in an inservice session and (10) county agents, with similar backgrounds, who did not participate in the inservice session. The independent variable or major treatment (X) was the inservice training program which included eight (8) slide sets and three (3) films about mastitis in dairy cattle.

Findings. The results of this study indicate that the inservice training program which was planned utilizing slides and films was effective in teaching county agents and veterinarians about mastitis, and they were effective in teaching farmers about the disease.

The average pretest score of the inservice participants was 72.4. Following a three day training session the same test was given to the students. The average posttest score of the participants following the training was 86.2, an increase of 13.8.

All participants test scores increased. They ranged from a 4.5 grade point increase to an increase of 26.6 points. Participants who were involved in a pre- posttest and who did not have the training showed a small decrease in their test scores.

Information. For additional information, contact: Don Fowler, Extension Agent, Franklin County Extension Service, Courthouse Annex #1, McConnellsburg, PA 17233, Telephone: (717) 485-4111.

# UTAH

ABANG, A. N. "Grain Corn and Grain Sorghum: A Yield Comparison in Cache County Area of Utah." Report, Master of Science, 1985, Utah State University, Logan, Utah.

Purpose and Method. A field demonstration trial involving five varieties of grain corn and grain sorghum were conducted to compare the yield of grain corn with grain sorghum in the North Experiment Farm in Cache County, Utah. The average yield of grain corn was 95.46 bu/acre while the mean yield for grain sorghum was 67.55 bu/acre. The grain sorghum had an additional yield 4 to 5 tons per acre of stalks that could have been harvested (after the heads were harvested) and fed to livestock. The average protein content in sorghum was 7.4% and 6.22% for corn. This trial resulted in corn yielding an average of 27.91 bushels per acre higher than grain sorghum but sorghum produced 1.2% protein and 10.33% acid detergent fiber higher than corn.

Findings. The results of these findings should facilitate the selection of high yielding varieties adaptable to Cache Valley conditions, demonstrate the cultural practices involved, and help farmers determine which of these two crops to include in their cropping program.

Information. For additional information, contact: Department of Agricultural Education, Utah State University, Logan, Utah 84322-4805, Telephone: (801) 750-2230.

BANKS, S. J. "A Comparison of Utah Farmers' Perceived Manpower and Training Needs in 1980 and 1984." Thesis, Master of Science, 1984, Utah State University, Logan, Utah.

Purpose. The Agricultural Education Department at Utah State University is in the process of developing a new statewide high school curriculum for vocational agriculture. A previous study was conducted in 1980 to determine what skills are necessary in production agriculture, but due to new innovations and changing techniques in the agricultural industry a more current study was needed. Therefore, this study was conceived to provide current information for the development of the high school vocational agriculture curriculum.

Method. This study replicates a previous study and therefore tests the rapidity with which agricultural production technology changes in Utah.

The purpose of this study was to determine and compare job competencies, employment demands and perceived training needs important to production agriculture in Utah between 1980 and 1984.

Findings. Some of the major findings included the following: (1) Of the respondents hiring full or part-time help only 19 (22.6%) offer any type of profit sharing program to their employees. (2) Of the 87 total skills surveyed only 25 (28.7%) showed a significant difference at the .05 level of significance from 1980 to 1984; of these, 17 (68%) increased in perceived importance while 8 (32%) decreased in importance. (3) Of the 87 skills used in this study 42 (48%) were rated between the important to very important level, while 45 (52%) were rated between the levels of some importance to important. (4) The five rated most important competencies among all major categories surveyed were servicing air cleaners, inspecting equipment for operating defects, maintaining cooling systems, maintaining lubrication, fuel and ignition system, and constructing and repairing fences, gates, doors, and pens. (5) The five least important individual competencies for all major categories were using artificial insemination, selecting appropriate marketing systems, placing fire extinguishers in building and on equipment, taking soil samples and utilizing information in determining fertilizer requirements, and interpreting and utilizing feed analysis reports.

Information. For additional information, Contact: Department of Agricultural Education, Utah State University, Logan, Utah 84322-4805, Telephone: (801) 750-2230.

## UTAH

ILIYASU, Y. "The Impact of Demonstration Methods To Measure Cage Layer Waste as a Fertilizer Source." Report, Master of Science, 1984, Utah State University, Logan, Utah.

Purpose. The purpose of this report was to identify a basis for using cage layer waste (CLW) in crop production, and to gain a practical experience in field demonstration work for future application in Nigeria. A secondary purpose was to report the results of the replicated demonstration plots to interested agriculturalists in Utah.

The objectives were:

1) To establish optimum application rates for cage layer waste that would be both economical and efficient for maximizing crop yield.

2) To identify the effects of high and low rates of cage layer waste application on selected common crops grown in Utah.

3) To identify the effects of the various application rates throughout the crop growing stages.

4) To identify soil residual effects of heavy cage layer waste application.

Method. The influence of cage layer waste and nitrogen fertilizer were observed on corn, potato, tomato, and onions. The statistical analysis, as well as observations, revealed that there was no signficant differences in yield between the treatments in corn, potato, and tomato. Considering the low cost of cage layer waste, the 4 tons per acre rate of cage layer waste will provide a higher net return in corn, potato, and tomato. The analysis for onion shows that there are significant differences between the treatment, and that onion did not show any positive response to the cage layer waste treatments. The effect of 8 tons of cage layer waste showed a burning effect and also resulted in lower yield in potatoes, onions, and tomatoes. The plots subjected to 8 tons showed a high residue of nitrogen sufficient for growing crops on the land the following year.

Findings. This study suggests that the rate of cage layer waste should not exceed 6 tons of fresh waste per acre (dry weight) for corn and potatoes, and maximum of 3 tons for tomatoes, onions, and other vegetable crops.

Information. For additional information, contact: Department of Agricultural Education, Utah State University, Logan, Utah 84322-4805, Telephone: (801) 750-2230.

OUSSEINI, K. "Controlling Iron Chlorisis in Raspberry Plants Utilizing Selected Commercial Product." Report, Master of Science, 1985, Utah State University, Logan, Utah.

Purpose. This study sought to identify the appropriate commercial products and the cost of their application on correcting iron chlorisis in raspberry plants, information and recommendations transferable to raspberry producers, and practical experience which also would be of use in field demonstration work in the writer's home country, Niger, West Africa.

Method. The study was conducted from June 12 to August 11, 1984, in a farmer's chlorotic raspberry field.

Commercial products tested were Duval's iron-sul, Cytozymes's Iron+, Lefingwell's ZIPP, ferrous sulfate, and Ciba Giegy's Sequestrene "330". Iron-sul was incorporated into the soil once. Iron+, ferrous sulfate and Sequestrene were applied once on the plant leaves, whereas ZIPP, because of its low content of Fe, was sprayed on the leaves once every two weeks.

Findings. In general, there was little improvement in plant appearance as a result of the iron treatment. None of the products completely eliminated the chlorotic condition. Analysis of variance showed there were not statistically significant differences among blocks or treatments, though the following products seemed to be more effective based on the mean scores of the treatments. Ferrous sulfate (35 kilograms per acre) seemed the most effective treatment, Sequestrene "330" (32 kilograms per acre) the second, and iron-sul (1,598 kilograms per acre) the third.

Economic feasibility analysis, based on the prices of these most promising products and on the cost of their application, showed the same relative rankings. Ferrous sulfate was the least expensive ($323.97 per acre) follwed by Sequestrene "330" and iron-sul.

Information. For additional information, contact: Department of Agricultural Education, Utah State University, Logan Utah 84322-4805, Telephone: (801) 750-2230.

SEYEDBAGHERI, M. M. "Effect of Selected Herbicides on Wild Oat and Broadleaved Weeds in Spring Barley." Report, Master of Science, 1985, Utah State University, Logan, Utah.

*Method*. Sixteen herbicide treatments were evaluated for control of wild oat (*Avena fatua*), lambsquarters (*Chenopodium album*), and hairy nightshade (*Solanum sarachoides*) in irrigated spring barley in northern Utah. The chemicals and rates (in kg a.i./ha) for each treatment were as follows: (1) chlorsulfuron .25; (2) chlorsulfuron barban .25 + metribuzin .25; (10) barban .25 + metribuzin .38; (11) difenzoquat 1.00; (12) bromoxynil .38; (13) difenzoquat .75 + bromoxynil .38; (14) bromoxynil .38 + MCPA .38; (15) diclofop 1.00; (16) diclofop .75 + bromoxynil .38.

*Findings*. The most effective treatments against wild oat were difenzoquat and diclofop, with or without bromoxynil, and barban, metribuzin, or a combination thereof. Lambsquarters was effectively controlled by all treatments except diclofop, difenzoquat, and barban. Treatments containing dicamba, bromoxynil, 2, 4-D, or high rates of chlorsulfuron or metribuzin were most effective in control of hairy nightshade. The best treatments for broad-spectrum weed control were difenzoquat + bromoxynil, diclofop + bromoxynil, and metribuzin.

*Information*. For additional information, contact: Department of Agricultural Education, Utah State University, Logan, Utah 84322-4805, Telephone: (801) 750-2230.

## UTAH

SPIELMAKER, C. M. "A Comparison of Employee Demand and Job-entry Requirements for Utah's Farm Implement Industry in 1981 and 1985." Thesis, Master of Science, 1985, Utah State University, Logan, Utah.

Purpose. To determine manpower and competency needs perceived by the Utah farm implement dealers, to hopefully assist vocational agriculture educators in curriculum planning.

Method. This research is a replication study and therefore demonstrates changes that have taken place in Utah's farm implement industry between the years of 1981 and 1985. Comparisons of data collected for these two years were made and tested for significant differences by an analysis of the variance.

The population consisted of all Utah farm implement dealers contacted by phone and asked if they would be willing to participate in this study. A questionnaire was mailed to all dealers who had agreed to participate. Questionnaire responses were collected over the phone one week later. The final response rate was 85 percent.

Findings. Some of the major findings included: (1) An overall decrease was seen in full-time and part-time employment between the years of 1979 and 1985, however, industry dealers are anticipating an increase of 16 percent in full-time and a 21.7 percent increase in part-time positions by 1987. (2) Of the 30 mechanic skills surveyed, this study found that 18 competencies were significantly different, at the .05 level, between 1981 and 1985. Two competencies of the 1985 survey ranked higher and had higher mean scores than in 1981: (1) maintain and practice shop safety, and (2) be familiar with OSHA standards and regulations. The remaining 16 significantly different competencies had lower mean scores but rankings were not drastically affected. The first, second, and third-ranked competency items in 1985 all dealt with safety, where in 1981 the ability to perform preventive maintenance ranked first. This item ranked fourth in 1985. (3) Of the 21 agribusiness skills surveyed, this study found that 6 were significantly different, at the .05 level, between 1981 and 1985. All significantly different agribusiness competencies were rated lower in 1985 than in 1981; however, this did not drastically affect the rankings of importance. The ability to read well, write legibly, do basic math problems, and to have proficient use of written and oral communication rated significantly lower in 1985 than in 1981, although the competency mean score was still considered important. (4) Prospective employees entering the Utah farm implement industry will not receive any preference, either in hiring or salary by obtaining a four-year degree. (5) Vocational training emerged as being more important to dealers in hiring practices in 1985 than in 1981.

Information. Contact: Dept. of Agricultural Education, Utah State Univ., Logan, UT 84322-4805, Telephone: (801) 750-2230.

WILLIAMS, R. D. "The Alberta Certified Feeder Program for Preconditioned and Preimmunized Calves." Thesis, Master of Science, 1984, Utah State University, Logan, Utah.

Purpose. The mortality rates of preconditioned and preimmunized calves in the feedlots were compared to the mortality rates of calves that went through the same selling system (auction markets) but had no special treatments prior to being sold and to entering the feedlots.

Methods. The calves were in feedlots in the Provinces of Alberta and Ontario, with 91 locations reported as having one or both classes of preconditioned and preimmunized calves. Only a total of 12 lots, 8 in Alberta and 4 in Ontario, reported having all three classes as outlined in the research design.

Findings. In Alberta the mortality rate for the preconditioned class was 2 calves out of 261 calves, in 8 locations, with a death loss of .77%. The highest individual location, Ponoka West, had a death loss in the preconditioned group of 2 calves out of 42 calves for a 4.76% death loss.

The preimmunized class had a death loss, at the Ponoka Central, of 2 calves out of 176 calves with a 1.1% mortality rate. The highest individual preimmunized location, Ponoka West, had a death loss of 2 calves out of 7 calves for a 28.5% mortality rate.

The auction market class (control group) had a death loss of 17 calves out of 938 calves for a 1.81% mortality rate. The highest individual location, Ponoka West, had a death loss of 1 calf out of 13 calves for a 7.7% mortality rate.

The four locations in Ontario reported no death losses in the preconditioned or preimmunized classes. The auction market class (control group) reported a death loss of 4 calves out of 740 calves for a .54% mortality rate. The Glen Morris location reported the highest death rate of 1 calf out of 100 calves for a 1% mortality rate.

No significant difference between the preconditioned, preimmunized, or control group was shown for the classes as organized.

Information. For additional information, contact: Department of Agricultural Education, Utah State University, Logan, Utah 84322-4805, Telephone: (801) 750-2230.

EFFENDI, M. N. "Crops Information Needs of Farmers as Perceived by Selected West Virginia Farmers, County Extension Agents and Vocational Agriculture Teachers." Master of Science Thesis, 1984, West Virginia University, Morgantown.

Purpose. The study was designed to determine perceptions of farmers, county agents and vocational agriculture teachers concerning additional crops information needs of family farmers of West Virginia that are essential for successful operation of the farm business.

Method. Questionnaires were developed and were mailed to all county extension agents and vocational agriculture teachers in the State, and to a stratified sample of progressive farmers selected by county extension agents. Of the possible 439 respondents, 257 (58.5 percent) returned the questionnaires.

Findings. The most important information needs as perceived by respondents were (a) cost/profit analyses of production practices, (b) insect, disease and weed control in field crops and vegetables production, (c) pasture management practices, (d) lime and fertilizer usage in field crops production, and (e) no-tillage farming pracatices. Vocational agriculture teachers perceive that farmers have a much greater need for additional crops information than do county extension agents and farmers.

Information. For additional information, contact: Dr. Layle D. Lawrence, Agricultural Education, 2056 A.S., West Virginia University, Morgantown, WV 26506-6108, Telephone: (304)293-3431.

# WYOMING

NEL, Hans E. "Wyoming's Ked-free State Program." Progress Report, 1986, University of Wyoming.

Purpose. The Wyoming ked-free state program is now in the second year of its scheduled five year duration. The program is aimed at eliminating the sheep ked, Melohagus ovinus, from sheep in Wyoming to improve the general health of the sheep, improve the quantity and yield of the wool clip, and to improve the quality of the pelt. The most severe damage caused by the ked, is the skin condition called cockle.

Method. With the help of the University Extension Agents, two sheep producers per county were selected in 1984 as cooperators in the Wyoming ked control program.

About 29,000 sheep from 45 cooperators in all 23 counties were treated with Ectrin, a new pyrethroid insecticide which was found to be very effective in research experiments at the U.W. The sheep were treated, as well as re-inspected, at times and locations when and were they had to be corralled for standard management practices like shearing or docking. Re-inspections were done within four to eight weeks after application of the chemical. Both the pour-on method, which was mostly used in small flocks, and the spray-on method proved to be from 99.5 to 100% effective in eliminating the keds. The high success rate of treatment are being used to demonstrate to sheep producers that this program is effective and can easily be fitted into a normal management program on the ranch or farm.

Findings. During May 1985, a questionnaire was sent out to all University Extension Agents, requesting names of producers who treated for keds, chemical used, and approximate numbers of ked-free lambs that will be available for marketing. The reponses received back showed that most of the big sheep operators in the state are now treating for keds. Thus, the response of producers to follow the example of the cooperators in this program was very, very encouraging. A good estimate will be that about 80% of all sheep in Wyoming were treated for keds in 1985. This may make about 400,000 ked-free lambs available for market. The very encouraging reaction of Wyoming sheep producers to the ked-free program, puts this program well ahead of schedule. Another encouraging development is that the Wool Growers Associations of Montana, Colorado, Idaho, South Dakota and North Dakota, already decided to follow the Wyoming program.

Information. Future inquiries can be made from: Dr. Hans E. Nel, Animal Science, University of Wyoming, Box 3354, University Station, Laramie, WY 82071. Phone: (307) 766-2364.

# EVALUATION/ ACCOUNTABILITY

## FLORIDA

TAYLOR, C. L. and SUMMERHILL, W. R. "Effects of Color, Format, and Severity of Issue on Response Rate of Mail Questionnaires When Respondent Population Has Some Familiarity With Sender." Extension Program Development/Evaluation Specialists, University of Florida, Gainesville, Florida, 1985.

Purpose. The purpose of this study was to test the effects of (1) format and color, and (2) severity of issue (freeze damage to citrus industry) on response rate of mail questionnaires.

Method. Questionnaires were formatted two different ways, (1) a one page, legal size printed on front and back, and (2) a one sheet 11 x 17 center-folded with items on three pages. Two colors were used, white and buff. These combinations resulted in four different format/color combinations: (1) single page, white, (2) single page, buff, (3) center fold, white, and (4) center fold, buff.

Questionnaires were mailed to 2,322 citrus producers and grove managers. Each name was randomly assigned to one of four groups.

The Chi-square test for homogeneity of proportions was used to treat the data concerning format and colors. Correlation was used to determine if response rate was influenced by severity of freeze damage.

Findings. A response rate of 61 percent was obtained. There was no significant overall effect (test of no difference in proportions $x_3^2 = 0.580$; $P = 0.90$) of format and color of mail questionnaires on response rate. There was a significant (.05) relationship between severity of freeze damage and rate of response, the more severe the freeze, the greater the response rate. Acreage killed ranged from 93 percent in Putnam County to 20 percent in Brevard County.

Information. For additional information, contact: C. L. Taylor or W. R. Summerhill, Program Evaluation and Organizational Development, 311 Rolfs Hall, University of Florida, Gainesville, Florida, 32611.

HAYES, Michael. "Role Perception of the Cooperative Extension Service in Non-Metropolitan Counties as Perceived by County Agents, Voluntary Association Members and Community Members." Thesis, Master of Agricultural Extension, 1984, University of Georgia, Athens.

Purpose. The purpose was to describe the role perceptions of the Georgia Extension Service in nonmetropolitan counties, as perceived by voluntary association members, county leaders, and rural county agents. Relationships between the responses of the three groups were also studied.

Methods. Data was gathered by (1) interviews with 28 community leaders in Harris County, Georgia; (2) a questionnaire survey of voluntary association members in Harris County, Georgia; and (3) a mail questionnaire survey of Extension Agents (located in fifteen rural Georgia Counties). Harris County was used as an example of a rapidly changing rural county. A purposive sample of twelve organizations was selected that would represent all social/ethnic groups and members of both sexes. Sixty-nine members or 34 percent responded to the survey. Chi-Square and Cramer's V were used to analyze the data.

Findings. The results indicated that members of voluntary associations, community leaders, and non-metro Extension Agents feel that the Extension Service has many programs and services that are relevant to rural counties. Youth development was rated as the most important service according to voluntary association members. Community leaders indicated that the Extension Service should be assisting with education, community improvement, community beautification, and health issues. One hundred percent of the agents felt that farmers, farm families, and homemakers were appropriate clientele for the Extension Service.

Information. For additional information, contact: Dr. F. Richard Rohs, Department of Extension Education, University of Georgia, Athens, Georgia 30602, Telephone: (404) 542-3151.

# GEORGIA

MUDA, Wan M. B. W. "A Comparison of Extension Staff and Public Leaders' Opinions Regarding Program Development and Evaluation in the Cooperative Extension Service." Thesis, Master of Agricultural Extension, 1985, University of Georgia, Athens.

Purpose. The purpose was to analyze the viewpoints of extension staff and public leaders regarding various roles, responsibilities, resources, evaluation and accountability aspects of the Georgia Cooperative Extension Service.

Method. The data for this study was part of a larger, national study which was conducted in cooperation with the United Stated Department of Agriculture and the Federal Office of the Cooperative Extension Service. A questionnaire was mailed to 690 University of Georgia County, District, State and Administrative Staff and 314 public opinion leaders throughout Georgia on April 28, 1982. Of the Extension Staff surveyed, 589 or 85.36 percent responded, and of the public leaders surveyed, 130 or 41.40 percent responded. Frequency distribution tables and percentages were used to analyze the data. The t-test was used to test the significance of the relationships between the independent and dependent variables.

Findings. The results indicated that Extension Staff and public leaders felt that the Extension Service should place more emphasis on responding to locally perceived needs and problems. Both groups felt that the Federal Extension office of the USDA should devote more resources to building linkages and channeling information from other USDA agencies to the states.

Information. For additional information, contact: Dr. F. Richard Rohs, Department of Extension Education, Lumpkin House, Cooperative Extension Service, University of Georgia, Athens, Georgia. Telephone: (404) 542-3151.

ROWE, Corinne M. "Cooperative Extension in Northern Idaho: Who Uses Our Services? Results of a Four County Survey." CES Bulletin No. 640, February, 1985, University of Idaho, Moscow, Idaho.

Purpose. This study assessed Extension program use in four Idaho counties by the general public, the socioeconomic characteristics of users compared with nonusers, how users made contact with Extension, and the type of programs used. Also examined were respondents' perceptions of the usefulness of information received and both current users' and nonusers' level of interest in the educational offerings of Extension programs.

Method. Data were collected through a mail questionnaire of the general population in four northern Idaho counties. Final sample size was 275 from a 85 percent return. Analysis was by frequency distribution of characteristics and crosstabulated with Extension program offerings, method of use and interests in programs.

Findings. In these four rural Idaho counties, nearly half of the respondents had had some contact with the county Cooperative Extension Service. Of these, 55 percent were from rural nonfarm residences, 23 percent were from farms and the balance from small towns. Of respondents indicating farming and/or logging as their occupation, 54 percent had had Extension contact. Three-fourths of those residing on farms (regardless of occupation) had used the services and education programs of Extension. Idaho Extension was funded to serve a greater proportion of persons from households with lower incomes, with less education, who are older and are more likely to be unemployed or retired than is generally true nationally.

Extension programs showing highest use among respondents were home gardening and landscaping (49 percent), 4-H youth (44 percent), foods and nutrition (43 percent), and agriculture and farm management (41 percent). Greater contact was through written materials (53 percent) than other methods with attendance at workshops counting for only four percent of the respondents. Overall, users indicated information received was very useful. Gardening and landscaping, food preparation, nutrition and preservation, and housing, heating, and energy are programs attracting greatest interest for future educational programs.

Information. For additional information, contact: Corinne M. Rowe, Extension Rural Sociologist, CES, University of Idaho, Moscow, Idaho 83843, Telephone: (208) 885-6262.

## IOWA

HASKELL, Larry Jeff. "Future Direction of the Cooperative Extension Service as Perceived by Extension Personnel and Selected Public Leaders in Iowa." Dissertation, Doctor of Philosophy, 1984. Iowa State University, Ames.

Purpose. The purpose was to identify the future direction of the Iowa Cooperative Extension Service (ICES) as perceived by Extension personnel and selected public leaders in regard to four issue areas. The areas addressed were: program philosophy, mission, goals, and priorities; role, responsibilities, and resources; program delivery methods; and evaluation and accountability.

Method. A questionnaire was mailed to all ICES personnel (a total of 498) and 716 selected public leaders on April 20, 1982. Participants were asked to rank the importance of five listed program areas. The program areas were: agriculture production and marketing; 4-H youth; home economics, nutrition and family concerns; community and economic development; and natural and environmental resources. Participants were also asked to indicate, on a six-part Likert type scale, their perceptions of the future direction of the ICES through questions pertaining to the four identified issue areas. Mean scale scores were computed for the two groups. One-way analysis of variance and t-tests were performed on the perception scales.

Findings. The results indicated that there were significant differences in the perceptions of Extension personnel and public leaders toward the four issue areas. There were also significant differences in the perceptions of Extension personnel and public leaders when each was grouped by selected demographic variables. The public leaders' responses tended to be more homogeneous than the responses of the Extension personnel.

Information. For additional information, contact: Dr. Larry Haskell, Department of Agricultural Education, University of Nevada, Reno, Nevada 89512, Telephone: (702) 377-2107.

## KANSAS

MORTVEDT, Marjory M. and BRAZZEL, Michael. "Organization and Management for Effective Impact Studies in the Cooperative Extension Service." Staff Study, 1985, Kansas State University, Manhattan, Kansas, and USDA-Extension Service, Washington, D.C.

Purpose. The purpose was to provide a current look at the ways states are organizing to do Extension impact studies.

Method. A purposive sample of A/E contact people, or their delegates in 31 states was interviewed to obtain diversity of state organization to do evaluation and to assure a regional balance. Data were collected about staffing, organizational patterns, evaluation roles, resource strategies, and attitudes of administrators, specialists, agents and area personnel. These data were divided by high and low resource (FTE) states and were analyzed qualitatively.

Findings. A total of 28 evaluation specialists (22.95 FTE) was found. The general trend was that the higher the state's resources, the more likely it was to have a named evaluation unit. The states were organized in many ways to conduct the evaluation studies. Seven organizations' styles were found and named by the researchers. A variety of resource strategies was found.

Most of the evaluation specialist roles found were centered around providing technical assistance and coordination to the people who actually did the studies. Subject matter specialists had a very important role in the impact studies, yet the attitudes of this group, as a whole, were the least favorable toward impact studies of people in all positions. Implications of the study point to the need to train program specialists in evaluation and to set up organizational structures and management patterns which assure quality control of impact studies.

Information. For additional information, contact: Marjory Mortvedt, Extension Specialist, Evaluation and Program Development, Room 112, Umberger Hall, Kansas State University, Manhattan, Kansas 66502, Telephone: (913) 532-5787.

YABAYA, Solomon A. "Developing a Conceptual Framework for Evaluating Economic and Social Consequences of Cooperative Extension Work Impact." Doctor of Education Dissertation, 1985, Louisiana State University, Baton Rouge.

Purpose. The basic purpose was to develop a conceptual framework of economic and social consequences for evaluating Extension work. The general objectives were 1) to develop and refine a taxonomy of economic and social consequences of Cooperative Extension programs, and 2) to develop a generic model for measuring economic and social consequences of the Cooperative Extension program impacts.

Method. The respondents consisted of 204 Extension specialists in the State Cooperative Extension Services of the U.S. This population was made up of Extension sociologists, Extension economists and resource development, program development and evaluation specialists. The respondents were identified by the State Extension Directors. Data were collected using a mail questionnaire. The respondents reacted to an eighty indicator instrument, and their responses were analyzed on the basis of appropriateness, importance and measurability ratings of the indicators. Importance ratings of the indicators were also analyzed by the job responsibility and the years of service of the respondents. The ANOVA test at the .05 level of confidence was used to determine statistical significance.

Findings. The findings indicated that the indicators proposed were largely accepted as appropriate and important, with measurability perceived as being fairly difficult.

The proposed indicators were generally accepted as important for measuring Extension program impacts, with importance scores levels being related in some cases with the specialists' disciplines.

Measurability of the indicators as a result of Extension program impacts was perceived as being difficult, and this was more generally true for the subjective indicators, compared with the more quantifiable indicators. Non-Extension factors were also perceived as being difficult to measure and/or evaluate.

A person's perception of an indicator as important was found in some instances to be related to job responsibility.

There was also a positive relationship in some instances between years of experience and perceptions of the importance of the indicators by the respondents.

Information. For additional information, contact: Solomon Yabaya, P.O. Box 185 Kafanchan, Kaduna State, Nigeria.

MCDOWELL, George R. "The Political Economy of Extension Program Design: Institutional Maintenance Issues in the Organization and Delivery of Extension Programs." American Journal of Agricultural Economics, November, 1986.

Purpose. This article deals primarily with understanding the important role that Extension plays in generating support for the Land-Grant university system. It makes clear that simply doing a good educational job may not be sufficient to generate the desired support and suggests that the way that programs are designed, packaged and delivered are of some consequence. It sets forth an analytical framework for understanding the relationship between the issues of program design and audience support.

Method. This analysis is a political-economic analysis and is in the Institutional Economics tradition. It uses a large number of illustrations and examples to make its arguments.

Findings: Besides its educational functions, Extension is expected to generate political support for the Land-Grant Universities. The necessary conditions for Extension programs to elicit political support from clients are: (1) a positive net benefit: 2) benefits are clearly attributable to Extension; 3) the feasibility of political solicitation; and 4) individual benefits be of sufficient magnitude to motivate political action. The characteristics of programs that affect these conditions are the attributes of 1) incompatible use, 2) exclusion costs, and 3) joint impact.

The instrument of program design that influences these attributes is the degree to which information is particularized to a specific audience. However, some methods of particularizing information such as personal contacts generate relatively less support for the organization and more for the individual agent. In order to generate audience support consideration must be given to the packaging of information, and to the interaction of program content, program design, and audience characteristics. Program design considerations are also important in interorganizational competition for audience support and for access to resources. For both audience support and interorganizational competition publications are essential. The article concludes a paraphrase of the academic edict, "Publish or there will be no program".

Information. For additional information, contact: George R. McDowell, Associate Professor, Department of Agricultural and Resource Economics, University of Massachusetts, Draper Hall, Amherst, MA 01003, Telephone: (413) 545-2495/6.

## MISSOURI

ABDEL-REHIM, Saber Mostafa. "Clientele and Council Officer's Perceptions of the Missouri Agricultural Extension Service." Dissertation, Doctor of Philosophy, 1983, University of Missouri-Columbia.

Purpose. The purpose of this study was to ascertain the quality of the Agricultural Extension programs as perceived by Extension council officers and Extension clientele.

Method. The population of this study included all Extension council officers and Extension clientele who use the Extension program in rural and urban counties in Missouri. The sample consisted of 80 Extension council officers and 240 Extension clientele in ten selected rural and ten selected urban counties. An instrument developed by Young and Cunningham was modified to use in this study. Data were analyzed using the analysis of variance and Fisher's least significant difference test (LSD) for mean separation. Null hypotheses were tested at the .05 alpha level.

Findings. (1) Extension council officers and Extension clientele -- rural or urban -- were basically satisfied with the Agricultural Extension Service in Missouri. (2) Extension clientele indicated improvements were needed in some areas. (3) An analysis should be made of the training programs for area agricultural specialists to ensure more experience and background at employment. (4) Older persons and those citizens of longer residence seem to be less critical of the Extension program. (5) Those more educated persons were less patient than those with less education on release of new information.

Information. For additional information, contact: Education Academic Affairs, University of Missouri-Columbia, 109 Hill Hall, Columbia, Missouri 65211, Telephone: (314) 882-8311.

## NORTH CAROLINA

SCHROEDER, Marie E. "The Cooperative Relationship Between Vocational Agriculture Teachers and County Extension Agents in North Carolina." Master of Science Thesis, 1985, North Carolina State University, Raleigh.

*Purpose*. The primary purpose of this study was to determine the amount and types of cooperation that occur between vocational agriculture teachers and county extension agents in North Carolina. A secondary purpose was to aid vocational agriculture teachers, county extension agents, teacher educators, and administrators in their understanding of the cooperation that is possible and desirable between agency personnel.

*Method*. The population consisted of 390 vocational agriculture teachers and 100 county extension chairmen in North Carolina. The samples consisted of 194 or 49.7% of the teachers and 80 or 80.0% of the extension chairmen.

The two samples were sent the same questionnaire. The first section of the instrument listed various factors which influence cooperation. The teachers and extension agents responded using a five-point scale as to whether the factors had a negative or positive effect on cooperation. In the second section of the instrument, the perceptions of the vocational agriculture teachers and county extension chairmen were obtained as to the appropriateness and occurrence of various cooperative activities.

The data were analyzed based on 132 (68.0%) responses from the vocational agriculture teachers and 78 (97.5%) responses from the county extension chairmen. Data from the first section of the instrument were analyzed using the t-test, and the chi-square test was used to analyze the data obtained from the second section of the instrument.

*Findings*. It was determined that there was a significant difference between the responses of vocational agriculture teachers and county extension chairmen as to the effect the factors "colleague's years of experience," "educational background of colleague," and "instructional methods," had on cooperation. Furthermore, there were significant differences in the perceptions of vocational agriculture teachers and county extension chairmen as to the appropriateness of the activities "participate in joint in-service training," "share publications," "share teaching materials," "conduct fund raisers," "organize demonstration plots," and "conduct adult classes."

*Information*. For additional information, contact: Jeffrey W. Moss, Department of Agricultural, Extension, and International Education, Louisiana State University, Baton Rouge, Louisiana 70803, Telephone: (504) 388-5748.

# NORTH DAKOTA

MELIN, Thomas L. "Perceptions of County Commissioners Toward the Minnesota Extension Service." Master of Science Coloquium Paper, 1985, North Dakota State University, Fargo, North Dakota.

Purpose. The major purpose of this study was to determine the perceptions of County Commissioners toward the Minnesota Extension Service at both the county and state levels. Specific objectives were to determine the perceptions of County Commissioners toward: (1) the quality of County Extension Service programs conducted in the counties; (2) their working relationships with County Extension Staff; (3) their working relationships with State Extension Staff; and (4) differences according to county population, length of service and extension committee involvement.

Method. Two county commissioners were randomly selected from each of the 89 counties in Minnesota for a sample of 174. A questionnaire was developed to gather data examining the perceptions of the commissioners toward the quality of county extension programs and the working relationships between commissioners and the county and state extension staff. The response rate was 79.3 percent. Chi square was used to test for differences in perceptions according to county population, length of service and involvement on county extension committees.

Findings. County commissioners had generally favorable impressions of the quality of county extension programs. The response was slightly less favorable for community and natural resource development than for the other program areas.

The county commissioners had generally favorable working relationships with county extension staff. Their relationships with state extension staff were rated somewhat lower. This may be due to distance involved between them.

No differences in perceptions were found based upon the variables of county population or length of service. Significant differences were found for two items for the variable of county extension committee involvement. Those with such experience viewed the working relationships more favorably.

Information. Thomas Melin, County Agent, Norman County, Ada, Minnesota 56510.

## OKLAHOMA

ISOH, Aloysius D. "County Extension Agricultural Agents' Perceptions of the Effectiveness of Selected Criteria for Program Evaluation in the Oklahoma Cooperative Extension." Dissertation, Master of Science, Oklahoma State University, Stillwater.

_Purpose_. The population of the study comprised all of the 77 county extension agricultural agents in all Oklahoma counties. Of the 77 counties, 71 agents responded. Two counties had no agricultural agents at the time, and four county agents did not complete the questionnaire.

_Method_. The questionnaire was administered to agents who were requested to respond to a listing of 30 selected criteria for program evaluation by circling one of the five points on a Likert-type scale in the left column which best expressed their perceived "importance", and in the right column their perceived "effectiveness" on a similar scale of each criterion. In addition, five questions were included to elicit personal demographic information. With the use of descriptive statistics, the frequency of the response and percentages for each item, as well as means for importance and effectiveness were calculated. For deviation from the mean, standard deviation was also calculated. Absolute limits for both the importance and effectiveness means were established. Any of the selected criteria whose importance or effectiveness mean fell below 3.50 was considered as needing review, reassessment or improvement for future program evaluation.

_Findings_. Analysis of data revealed that of the selected respondent characteristics, only previous training in program evaluation had an effort on the way agents reacted to the questionnaire. Criteria found which were considered as needing improvement in importance for evaluation included, target audience identification, consideration of audience socieconomic characteristics, interpreting program outputs into documented reports, and using outcome reports for future program planning. Criteria considered needing improvement as to effectiveness by the agents included, target audience identification, developing programs jointly with county clientele and, consideration of audience socioeconomic characteristics. It was concluded that there was need for agents to have continuing in-service training in program development including evaluation. All other criteria were perceived as being important and effective for evaluation.

_Information_. For additional information, contact: Aloysius Isoh, Mississippi State University, Department of Agricultural and Extension Education, Post Office Drawer AV, Mississippi State, MS 39762, Telephone: (601) 325-3326.

WEBB, Dirk N. "Role of the Cooperative Extension Service as Perceived by Personnel of Other Selected Southwest Oklahoma USDA Agencies." Thesis, Master of Science, Oklahoma State University, Stillwater.

Purpose. The purpose of this study was to determine the perceptions of related USDA agency administrators in 20 Southwest Oklahoma counties concerning current Cooperative Extension program areas and implications for future programs.

Method. Questionnaires were mailed to 59 USDA administrators during the spring of 1983. Thirty-nine (66%) of the agency administrators responded to the survey. The format of the questionnaire included short answer items and statements requiring answers of an interval scale. This survey was comprised of 25 short answers and questions and 40 items with designated categories regarding levels of current program effectiveness and implications for priority of future programs. Since sampling was not involved and the attempt was made to survey all administrators of the three selected USDA agencies, descriptive statistics were utilized to treat the data. Statistical analyses used to describe the data included frequencies, percentages, and means.

Findings. The results of the study revealed that over 25 percent of the USDA administrators surveyed had from 11 to 15 years of service, while over 76 percent of the respondents were housed in agency offices with a "mostly rural setting." A majority of the respondents indicated that their contact with Cooperative Extension had come through their families' involvement with 4-H and their personal involvement with the agricultural program. Furthermore, the respondents' perceptions revealed that educational meetings and personal contact seemed the most effective methods of transferring information to Extension clientele. As the result of "a common clientele," the agency in which the administrators were employed determined to an extent their perceived awareness of current programs and priorities for future programming. Agriculture seemed to be the program area perceived as being the most effective with regard to present programs. Specific priorities for future programming was perceived to be in the areas of Agricultural Economics and Youth Leadership Development. Cooperative Extension should develop a public relations program designed to communicate program emphasis and awareness to related USDA agencies to meet the needs of "a common clientele."

Information. For additional information, contact: Dirk N. Webb, Co. Ext. Ag. Agt. & C.E.D., Roger Mills Co., Box 9, Fairgrounds, Cheyenne, Oklahoma 73628, Telephone: (405) 497-3339.

MARSHALL, Mary G. "The Importance of Criteria for Evaluating Organizational Effectiveness as Perceived by Selected Extension Decision Makers." Dissertation, Doctor of Philosophy, 1983, University of Wisconsin-Madison.

Purpose. Limited empirical research has been reported on the use of evaluation criteria. Evaluation models in extension literature emphasize "goal attainment." Suggested influences on criteria used in evaluations include organizational position and approach toward extension education. This study determined the perceived importance of effectiveness criteria and variables related to those perceptions.

Method. Mailed questionnaires obtained data about the perceived importance of 27 criteria for evaluating Extension's effectiveness and preference for written effectiveness standards. Respondents were 180 extension administrators, campus-based specialists, area specialists and county council officers randomly selected from decision making positions in Missouri's Cooperative Extension Service.

Findings. The results indicated that decision maker positions in Missouri Extension differed significantly in their ratings of the importance of 27 effectiveness criteria. The most important criteria were those related to "goal attainment or results," in administrator, campus and area specialist groups, but council officers said "satisfaction" criteria were the most important. Extension professionals favored the use of written effectiveness standards but council officers did not.

Decision makers who held different educational approaches differed significantly in their perceptions of the importance of criteria. Respondents having a high content acquisition/high problem solving orientation to education rated "goals-results" criteria as most important. Respondents with a low problem solving/high content acquisition orientation rated "satisfaction" criteria as most important. Respondents low in both orientations rated all criteria lower in importance.

Information. For additional information, contact: Dr. Mary G. Marshall, Extension Program Development Specialist, Texas Agricultural Extension Service, Special Services Building, College Station, Texas 77843-2141, Telephone: (409) 845-7210.

EWANG, Peter N. "Criteria for Assessing the Cooperative Extension Program Planning Process in West Central District of Virginia." Doctoral Dissertation, Virginia Polytechnic Institute and State University, Blacksburg.

Purpose. The purpose of this study was to formulate criteria for assessing the local cooperative extension program planning process in the West Central Extension district of Virginia.

Method. The identified essential extension programming principles were sent for verification to a panel of 8 persons who were selected to act as experts. Criteria were formulated based on the verified principles and these were also sent to the same panel of experts for them to verify. A random sample of 10 extension units from the 18 units in the West Central extension district of Virginia was used for field testing. Unit directors of the selected units were interviewed using the formulated criteria to determine the degree to which the criteria were used as guides during the local extension program planning process. Mean weighted scores and descriptive statistics were used in analyzing and interpreting the data generated by the rating of importance and use made of each criterion in program planning.

Findings. Six of the seven statements were accepted as principles for planning effective local extension programs. Eighteen formulated criteria were identified as useful standards for assessing the local extension program planning process. The unit directors indicated that all criteria describing standards to follow in planning local programs were used from a high to medium degree as guides during their planning process. The unit directors also indicated that all criteria are important in local extension planning process activities. The panel of experts and unit directors agreed that the criteria were important standards for planning local program but differed slightly on the degree of importance that should be assigned each criterion.

Information. For additional information, contact: John R. Crunkilton, Agricultural Education, 222 Lane Hall, Virginia Tech, Blacksburg, VA 24061, Telephone: (703) 961-6836.

FLYNN-MACPHERSON, Terese. "A Naturalistic Evaluation of the Family Community Leadership Program." Thesis, Master of Adult and Continuing Education, 1985, Washington State University, Pullman.

Purpose. The overall purpose of this study was to evaluate the Family Community Leadership (FCL) program from the perspective of the participants. The following objectives were identified: 1. To identify participant perceptions of the strengths of the FCL program. 2. To discover participant perceptions of the weaknesses of the FCL program. 3. To present participant perceptions of the personal impact of their involvement in FCL.

Method. This study was based on the naturalistic paradigm for research and employed qualitative methods. Unstructured interviews were conducted with 27 participants from the program. Informal document analysis, member checks, and review of the collected information by an auditor were utilized to insure the trustworthiness of the data. Literature was reviewed related to three central concepts of the educational format of FCL: experiential learning, peer education, and group learning settings. Additionally, the use of naturalistic methods of evaluation were discussed in reference to the pertinent literature.

Findings. The range of participant perceptions in respect to the strengths, weaknesses, and personal impacts were identified. One of the strengths identified by participants was the program context which was supportive, egalitarian, responsive to their needs, and professional. Specifically, they found the State Institute, group settings, experiential learning activities, peer education, and modeling of behaviors and skills to be significant. Maintaining participant commitment was the major concern of those interviewed. They suggested a number of ways to deal with this, such as: more selective recruitment, greater involvement in existing community groups, increased support for local FCL teams, and more communications. Participants cited a number of personal impacts as a result of their FCL experience. Most participants reported improved self esteem. As a result of this change, many participants gave examples of how their relationships with others had improved, they had gotten more involved in their communities, they had made positive changes regarding their employment or educational pursuits or their family relationships had positively changed.

Information. For additional information, contact: Terese Flynn-MacPherson, Student Recruitment Specialist, Washington State University, Pullman, Washington 99164-6242, Telephone: (509) 335-3359.

HOGAN, Michael P. "The Role of Extension in Rural America as Perceived by United States Senators." Master of Science Thesis, 1985, West Virginia University, Morgantown.

Purpose. Purpose of the study was to determine how U.S. Senators perceived the role of the Cooperative Extension Service in rural America. Objectives were to identify CES programs Senators perceive as being most important to the rural population, and to determine if Senators perceive the CES as providing a necessary service to rural America.

Method. Forty-two specific functions of the CES in rural America were identified and organized to form a questionnaire. Functions were categorized under the headings of agriculture, community and natural resource development, home economics and human resource development, and 4-H and youth development. The questionnaire was mailed to all U.S. Senators. Fifty-three responses were received of which six were returned with the questionnaire uncompleted by senators who refused to participate in the study. In testing non-response bias, geographic region and party affiliation showed no significant differences between respondents and nonrespodents.

Findings. Data obtained indicate that U.S. Senators feel that the CES provides a necesary service to a large segment of the rural population of America. While a majority of Senators have participated in CES programs, those from the southern and north central states were more likely to have participated. The role of CES was perceived similarly by those who had and had not participated in CES programs. Differences of opinion were found to exist on the basis of geographic regions and party affiliations. Strong support was found in the Senate for the traditional CES programs of agriculture and 4-H. Senators also thought highly of CES programs that positively impact the economic welfare of families, communities and states.

Information. For additional information, contact: Dr. Layle D. Lawrence, Agricultural Education, 2056 A.S., West Virginia University, Morgantown, WV 26506-6108, Telephone: (304)293-3431.

# COMMUNITY RESOURCE DEVELOPMENT

CLEMENTS, Debra K. "Environmental Perspectives in Georgia." Thesis, Master of Agricultural Extension, 1985, University of Georgia, Athens.

Purpose. The purpose of this study was to determine the level of knowledge held by leaders on the subject of the environment and its relationship to their perception of environmental problems in the state. County commissioners were identefied as the target group because of their role in determining environmental policy at the local level.

Method. A standardized knowledge test of ecology was sent to 100 randomly selected County Commissioners. The face validity of this test was established by consulting the opinions of several researchers in environmental science at the University of Georgia. Of the one hundred commissioners sampled, fifteen went out of the office before or during the time of the study. Of the remaining 85, 36 or 42.4 percent responded. Demographic data was obtained from the survey. Descriptors were obtained by completing statistics of central tendency and variability. Chi-Square was used to establish statistical significants in testing hypothesis about variable relationships. In investigating knowledge scores and their relationship with age, Pearson Product Moment Coefficients and linear regression was used.

Findings. The results indicated that Georgia County Commissioners have more knowledge of basic ecology than was originally expected, and that the age of the Commissioners was negatively correlated with level of knowledge as measured by the standardized test. It was also found that while commissioners and the environmental experts agreed on what environmental issues are important in Georgia, they did not agree on the level of importance of each individual environment problem facing the state.

Information. For additional information, contact: Dr. F. Richard Rohs, Department of Extension Education, Lumpkin House, Cooperative Extension Service, University of Georgia, Athens, Georgia 30602. Telephone: (404) 542-3151.

# LOUISIANA

CHAUHAN, Malikhan S. "Effectiveness of Extension CRD Advisory Committees as Perceived by Lay Members and Extension Professionals in Louisiana." Doctor of Education Dissertation, 1984, Louisiana State University, Baton Rouge.

Purpose. The study focused on the perception of lay members and Extension agents regarding the effectiveness of Extension CRD advisory committees.

Method. Empirical data were collected through mail questionnaires from 83 advisory committee members in 14 parishes and 52 Extension agents designated to CRD work in the state.

Indicators of perceived effectiveness chosen for the study were the purposes - functions rationale of Pesson and the educational needs and problems in community development work.

Findings. A majority of committee members felt that membership of committees was important for achieving community improvement, and gaining knowledge, self-satisfaction, and self-improvement. Members and agents agreed that cooperative problem solving, non-selfish behavior, and recognizing people for their efforts were significant for successful community development. That democratic decision-making was "the best way" to succeed in community development work was accepted by most members and agents. Organizational problems that were mentioned by both members and agents were lack of participation, apathy and inadequate leadership. Project funds and lack of recreation were cited as major problems in organizing services.

Members and agents perceived that committees were largely effective in achieving their purposes and functions. For improving the effectiveness of committees there was a great need expressed for educational material in a variety of community services and facilities. In most of the relationships studied there were no differences in the perceptions of members and agents. In those few cases where differences were statistically significant, members rated committees as being more effective than did the agents.

Information. For additional information, contact: Satish Verma, Specialist (Program Development) and Professor of Extension Education, Louisiana Cooperative Extension Service, Knapp Hall, University Station, Baton Rouge, Louisiana 70803, Telephone: 504/388-6194.

## LOUISIANA

RAJKUMAR, Tajpertab. "Poverty: A Descriptive Study of Attitudes and Aspirations Among Selected Respondents in North Baton Rouge." Doctor of Education Dissertation, 1985, Louisiana State University, Baton Rouge.

Purpose. The main purpose was to describe the attitudes and aspirations of low-income families in North Baton Rouge, Louisiana.

Method. Personal interviews were conducted with a random area sample of 100 heads of households living in low-income housing projects and areas surrounding housing projects. One-way analysis of variance was used to examine the relationships between mean attitude scores and selected variables. Frequencies and percentages were also utilized to show the distributions of responses.

Findings. Analysis of the data indicated that marital status, level of education, and extent of employment were associated with the subjects' attitude toward life. Other major findings of the study revealed that a majority of the subjects did not perceive themselves as being poor. Fifty-five percent had a positive outlook on life.

Their greatest aspirations were for material things (house, things for their children, automobile), health, happiness, staying alive, a high-paying job and a college education. Money, job, education, not trying harder and baby-sitting problems were identified as the major barriers to the fulfillment of their aspirations. Their children and self (being healthy and happy) were the main things they were satisfied with in life.

Other significant findings were that the subjects were not poor by choice, nor were they content with their economic deprivation. Forty-six percent depended on governmental assistance. The majority were not fully satisfied with their income and preferred to work. They recognized the role of the government in providing professional jobs/job training, a college education and willingness of some poor to try harder, as escape routes from poverty.

The poor may differ from others with regard to their priorities and decisions they make, but they are very similar in terms of their needs and wants. They have a strong sense of individuality, desire for love and have the readiness and desire to carry on despite their economic deprivation.

Information. For additional information, contact: Tajpertab Rajkumar, Extension Agent (4-H), Prince George County, 15209 Marlboro Pike, Upper Marlboro, Maryland 20772, Telephone: 301/952-4305.

## MICHIGAN

GONZALES-TORO, Carmen. "Educational Needs of Hispanics in the Lansing, Michigan Area: A Survey." Masters of Science Research Paper, 1985, Michigan State University, East Lansing.

Purpose. The study surveyed a sample of the Hispanic population in Lansing, Michigan to assess the degree to which that population participates in and is aware of the Cooperative Extension Service (CES); to identify the possible reasons for partiticipation or lack of participation in CES programs; and to assess the educational needs of Hispanics in the area as those needs relate to the current program area topics offered by the CES.

Method. A multiple needs assessment process was used where data were collected through interviews with key informants and by mailed questionnaires to a sample of Hispanic residents in the area. A total of 16 key informants were interviewed and 234 questionnaires were mailed, of which 62 were completed and returned (26.5% return rate) and analyzed. The data gathered were analyzed using SPSS program for item analysis with frequency and percentage distribution.

Findings. Mail respondents were found to be moderately (48.2%) aware of CES. Their participation in CES programs was reported as 16.4%. They reported a relatively low level of formal education (43.1% completed high school). They were mostly skilled workers with 72.9% employed. The largest percentage of the group was between 25-34 years of age. In contrast, key informants were very aware of CES (81.3%). Their participation in CES programs was reported as 40%. They reported a higher educational level with 53.3% having taken courses beyond the baccalaureate degree. They were predominantly professionals, all currently employed. The largest percentage of this groups was between 35-44 years of age.

The most frequently mentioned reasons for Hispanic nonparticipation in CES programs were: a) no time available to participate; b) too old to participate; c) lack of awareness; d) depends on family income; and e) language problems.

Both respondents groups perceived the 4-H and home economic programs as "highly needed" in their community. Within the 4-H priorities were set for food and nutrition, family and group relationships, careers and youth leadership. For the home economic program the priorities included health care, coping with inflation, parenting and self-esteem.

Information. For additional information, contact: Carmen Gonzalez-Toro, Department of Agricultural and Extension Education, Michigan State University, East Lansing, Michigan 48823, Telephone: (517) 355-6580.

MISSOURI

LACKEY, Alvin S. and CARY, Lee J. "Documenting and Quantifying the Outcomes of the Community Development Process." Department of Community Development, University of Missouri-Columbia and the University of Missouri and Lincoln University Extension, 1983 to present. Funded, in part, by the North Central Regional Center for Rural Development.

Purpose. To develop and test evaluative measures to quantify the outcomes of Extension Community Development activities in communities of less than 10,000 population.

Method. A 21-page questionnaire was developed and 72 interviews were conducted in one community of 4,500 during May of 1983. Those interviewed had been identified as community members who were active participants in one or more of 11 selected community activities in which the Extension Community Development Specialist had been involved. Seven outcome variables were the focus of the interviews, which included knowledge and skills learned, voluntary contributions, community attitudes, distribution of benefits, the role of the Community Development Specialist, capacity building, and participation.

Findings. The results indicated that 71 percent of those interviewed were involved in more than one of the 11 selected community activities, with the average being three activities per person. When asked specifically how they were involved, 92 percent said they attended meetings, 70 percent worked as members of committees or task forces, 45 percent contributed money, materials and/or services, and 45 percent said they assumed leadership roles. Time, money, and other resources contributed by the 72 respondents was recorded and assigned a dollar value by the person being interviewed. Services were conservatively calculated. When the contributions of these 72 were added to those of other community members less actively involved, the total value of all contributions was over one million dollars. Using $25,000 as the estimated cost to Extension for the time of the Community Development Specialist and administrative support allocated to the 11 selected community activities, each Extension dollar generated $40 in citizen's contributions.

Other results of the survey are available from the University of Missouri.

Information. For additional information, contact: Alvin S. Lackey or Lee J. Cary, Department of Community Development, 723 Clark Hall, University of Missouri-Columbia, Columbia, Missouri 65211, Telephone: (314) 882-8393.

## OHIO

BEHM, Karen S. "The Effect of a Litter Education Program on Attitudes and Behavior of Second and Fourth Graders in a Selected Ohio School System." Ph.D. Dissertation, 1984, The Ohio State University, Columbus.

Purpose. The objectives of this study were (a) to determine if a litter education program affected student attitudes and behavior regarding litter, and (b) to determine if the program was equally effective in second and fourth grades. The litter education program was developed and conducted by the Ohio Cooperative Extension Service under a grant from the Ohio Department of Natural Resources Office of Litter Control.

Method. A quasi-experimental research design was used. Forty-seven second and 64 fourth graders from one school made up the treatment group. Fifty second and 39 fourth graders in a neighboring school served as the control group. The treatment and control schools were matched by size of school, geographic area, and socioeconomic background of their students. Qualitative data was collected as a pretest to determine equivalency between the two groups. Students were given cookies on a paper plate and a napkin and observed in the classroom to determine their littering behaviors in the pretest.

A set of slides depicting a variety of potential littering situations was used to measure attitudes toward littering. Students were asked to respond YES, NO or I DON'T KNOW when asked whether a suggested behavior was appropriate. Behavior was determined by responses to series of behaviors that students may or may not have done. A two-by-two factorial design was used with amount of treatment and grade level being the two factors. There were two levels of each factor: Treatment and control, and grades two and four. Two-way ANOVA was used to analyze the data.

Findings. There was significant difference at the .001 level between the attitude scores of the treatment and control groups indicating that the litter education program was effective. There was no significant difference between grades. There was a potential interaction effect with a probability of .057 indicating that the program may be more effective in the fourth grade. Neither treatment nor grade level produced a significant effect on the behavior scores.

Information. For additional information, contact: The Department of Agricultural Education, 208 Agricultural Administration Building, 2120 Fyffe Road, The Ohio State University, Columbus, Ohio 43210-1099, Telephone: (614) 422-6321.

FOUNTAIN, Elizabeth A. and DOEKSEN, Gerald A. "A Community Development Guidebook for Rural Public Transit." Research Bulletin, 1986, Oklahoma State University, Stillwater.

Purpose. Due to the growth of rural public transit, tools to aid in the planning and feasibility assessment of rural transit are needed. The following areas are reviewed: estimation of ridership, routing, and the development of budgeting and performance guidelines.

Method. Multivariate regression models using Oklahoma trip statistic data were used to estimate ridership. Existing methods to simplify routing problems were reviewed, and a mileage matrix generator was developed. Capital and operating cost data were collected from the Oklahoma Department of Transportation and existing systems. Budget and trip statistic data were combined on a monthly basis to generate performance measures.

Findings. Ridership estimates were made on a countywide basis, as well as on a route and sector basis for fixed route and demand responsive services respectively. Significant independent variables included socioeconomic characteristics, transit service characteristics, and availability of other transit services. Routing was simplified through the use of an algorithm to generate a shortest path matrix. Budgeting guidelines based on capital equipment bids and operating budgets of eight rural public transit systems were outlined. Performance monitoring guidelines were presented and their use in the evaluation process discussed.

Information. For additional information, contact: Gerald A. Doeksen, Extension Specialist, Department of Agricultural Economics, Oklahoma State University, Stillwater, Oklahoma 74078, Telephone: (405) 624-6081.

# OKLAHOMA

FOUNTAIN, Elizabeth A. and DOEKSEN, Gerald A. "A Guidebook for Rural Physician Services." Research Bulletin, 1986, Oklahoma State University, Stillwater.

*Purpose*. The purpose of this study is to update methods which will allow community leaders to evaluate the community's ability to support a physician, or to allow a prospective physician to analyze a community's medical economic potential. Specifically, a procedure to estimate physician visits for a community's service area is reviewed, and estimates of annual capital costs, operating costs, and net income for physicians are developed.

*Method*. The data were collected from a detailed primary survey of rural Oklahoma physicians. The sample represented physicians who had established practices, as well as those who had been in operation for less than two years. It also covered the entire state geographically. Data collected included: the number of visits by month to the office, emergency room, hospital, and nursing home; capital costs including detailed equipment information; operating costs for the past year; lab procedures performed in the office; and rate structures.

*Findings*. The summary of the surveys is extremely useful to community leaders and physicians. Each can estimate annual office visits for a prospective community. If the community has sufficient calls to support a physican(s), leaders may wish to construct a clinic and rent to the physician(s). Because the research allows for the analysis of capital and operating costs for a community clinic, a prospective physician can estimate these costs, as well as revenues, to evaluate the profit potential for alternative communities.

*Information*. For additional information, contact: Gerald A. Doeksen, Extension Specialist, Department of Agricultural Economics, Oklahoma State University, Stillwater, Oklahoma 74078, Telephone: (405) 624-6081.

BAYNE, Margaret E. "Assessment of the Recreational Preferences of the Residents of Clallam County, Washington." Thesis, Master of Adult and Continuing Education, 1984, Washington State University, Pullman.

Purpose. The overall purpose of this study was to identify and assess the recreational preferences of the residents of Clallam County, Washington. The objectives of the study were: 1. To design and administer a survey instrument to identify and assess respondents' recreational preferences. 2. To identify and assess the respondents' preferences toward local recreational issues in their communities. 3. To identify and assess respondents' preferences and attitudes related to county-wide recreational issues under jurisdiction of the Clallam County Parks and Recreation Department. 4. To identify respondents' level of commitment toward specific preferred recreational projects along with the interrelationship, if any, with their demographic and socio-economic characteristics.

Method. Literature was reviewed relating to various concepts of recreation. Data were based upon self-reports from a random sample of residents.

Findings. The data suggested that while a large number of the listed recreational projects were important to the residents of each district, most residents were only willing to support a few through increased property taxes. Most residents were willing to provide support by participation in recreational offerings.

Most residents preferred to participate in more passive recreation activities.

Most of the county's residents either didn't use or were not satisfied with the recreational area under the jurisdiction of the Clallam County Parks and Recreation Department. More of the county's residents felt organized recreation programs should be offered than not offered.

A significant difference was found between specific respondent demographic and socio-economic characteristics in regard to their willingness to financially support a project.

Information. For additional information, contact: Margaret E. Bayne, Urban Agriculture Consultant, Montgomery County Extension Service, Gaithersburg, Maryland 20877.

# 4-H AND YOUTH

# FLORIDA

CULBERT, Daniel F. "Factors Contributing to Nonreenrollment of 4-H Club Members in Southeastern Florida." Master of Science Thesis, 1983, University of Florida, Gainesville.

Purpose. The purpose of this study was to determine the diversity and degree of importance of 4-H nonreenrollment reasons, to determine if reasons were associated with selected personal characteristics and programmatic variables.

Method. Data were collected through a questionnaire mailed to 4-H dropouts with followup telephone interviews of nonrespondents. A total of 139 usable instruments were completed by 364 4-H dropouts randomly selected from the total dropout population of 545 youth in Dade, Broward, and Palm Beach counties. Data were analyzed by using frequency, percent, means, weighted importance ratings, participation score, and Chi-square.

Findings. (1) Most respondents indicated their decision to leave 4-H was multifaceted in nature. The weighted importance of these reasons ranged between somewhat important and not important. (2) The most frequently given reasons for leaving 4-H were the club disbanded, the leader quit, and having too much else to do. (3) Respondents were generally older than 13, female, white, long term residents, were from families with two or three siblings and married parents, had both parents working, and did not have jobs. (4) Older respondents were more likely to dislike project books and 4-H meetings, viewed 4-H activities as repetitious or not fun, had jobs, and had too much else to do. Nonwhite respondents were more likely to have problems with transportation and paying for projects, were unaware of 4-H oppertunities, had jobs, and felt they did not recieve responsibility. Respondents with nonmarried parents were more likely to indicate transportation problems and a lack of support. Employed respondents were more likely to dislike competition, rules, and the 4-H leader; they could not express themselves, meet the other sex, or do what they wanted. (5) Respondents generally belonged to no more than one youth group, spent less than two years in 4-H, and had more than four friends in 4-H. Few reported being absent from meetings or having parents as leaders. The respondents were rarely involved in camp, public presentations, leadership positions, program planning, service projects, and extra-local activities. (6) Respondents holding leadership positions were more likely to indicate a lack of cooperation in the club. Those not receiving awards were likely to have problems paying for projects or dues. Respondents absent from meetings were more likely to indicate a lack of activities and inconvenient meeting times.

Information. Contact Daniel F. Culbert, Mercer County 4-H Agent, 930 Spruce Street, Trenton, NJ 09648, Telephone (609) 989-6833.

# IOWA

GAMON, Julia A. "An Experimental Evaluation of Resource Materials on Leaders/Delegation for 4-H Youth." Ph.D. Dissertation, 1984, Iowa State University, Ames.

Purpose. The study attempted to answer the research question: Was the resource packet effective in teaching delegation of leadership to 4-H youth? Secondary objectives dealt with group effectiveness and the relationship of member participation and delegated leadership to group drive, cohesiveness and productivity. Preferred leadership styles of youth were measured.

Method. Information was collected from 106 high school age youth at week-long 4-H leadership camps. Campers were randomly assigned to small groups. Trained adults provided over six hours of instruction using the new materials with the experimental groups and proven leadership materials with the control groups. Youth rated their level of participation tendency toward delegation and perceptions of group effectiveness on Likert-type scales. Preferred leadership styles were assessed on pre-tests and post-tests. Pearson's correlation was used to determine relationships between variables and t-tests were run to find differences between treatment levels. To strengthen the findings, the study was repeated twice.

Findings. In one of the camps the new materials made a difference (.05) in camper's tendency toward delegation. There were no differences between pre-test, post-test leadership styles. Delegation was not a preferred leadership style. Measurers of group effectiveness-drive, cohesiveness and productivity were highly and positively intercorrelated. Member participation was positively related to group effectiveness.

Conclusions were that leadership styles were stable. Extension staff may need to accept clientele preference for selling, participating leaderships styles and adopt structures and strategies which circumvent leadership delegation problems. As member participation increases, groups become more effective. As group cohesiveness increases, drive and productivity also rise.

Information. For additional information, contact: Julia Gamon, Assistant Professor, Ag. Ed. 217 Curtiss, ISU, Ames, Iowa 50011, Telephone: (515) 294-0897.

WHITE, Eddie. "A Study of Management Practices of Youth Owning Horses in Jackson Parish." Master of Science Thesis, 1984, Louisiana State University, Baton Rouge.

Purpose. The purpose was to characterize the youth in Jackson Parish who own horses, to establish their purpose for owning a horse, and to relate this to their adoption of recommended horse management practices.

Method. The data were obtained by personal interview of the 72 youth identified as horse owners in Jackson Parish.

The F test was applied to determine statistically significant differences in practice adoption by purpose for owning horses at the .10 level of probability.

Findings. On the average, youth involved in this study owned two horses valued at $573 each, spent 4.7 hours per week with their horses and owned them primarily for pleasure.

Youth who indicated competing as their major purpose for owning a horse had adopted proper riding techniques, health practices and nutritional practices to a greater extent than those youth indicating pleasure as their major purpose.

Youth with a higher level of adoption of recommended practices in riding technique, health and nutrition practices had a larger number of dollars invested in their horses than did youth with lower levels of adoption.

Youth who indicated a higher number of hours devoted to horses also indicated a higher level of adoption of recommended practices concerning riding technique, health and nutritional practices as compared to youth who spent less time with their horses.

The Extension Service rated low on the list of information sources used by youth. This is probably due to the lack of educational opportunities offered by the Extension Service to these youth.

Programs which deal with health and nutritional practices should be specifically targeted toward youth who own horses for pleasure.

Information. For additional information, contact: Eddie D. White, County Agent, Jackson Parish, Louisiana Cooperative Extension Service, Courthouse, Jonesboro, Louisiana 71251, Telephone: 318/259-2452.

CONVERT, Anita Miller. "Pets, Early Adolescents, and Families." Michigan State University, East Lansing. August, 1985.

Purpose. This paper reviews the patterns and effects of early adolescents' involvement in the care of animals and the relationship between that experience and selected family and individual variables. It provides baseline data on early adolescents and animal involvement concerning: species of animals, family income, family relationships, parental views of animal raising, animal owner self-esteem and self-management, and the view of youth on the benefits of animal involvement.

Method. Data were the results of a state-wide survey of 304 early adolescents and their parents conducted in 1983. Youths were interviewed in their homes and parents responded to a questionnaire. Subjects were selected using a stratified multi-stage cluster sampling technique.

Findings. Some of the findings are:

1. 89.4 percent of the early adolescents have cared for an animal for a long period of time.
2. Early adolescents owned a large variety of pets. Dogs were the most frequently owned pet with cats, rabbit/hamster, fish/bird, large animals, and horses following in that order.
3. Girls had more cats than boys. Boys did not seem to have more dogs than girls. Boys had more large animals than girls.
4. There did not seem to be a relationship between the youth's age and pet ownership.
5. As income increased, pet ownership increased. Specifically, as income increased, fish/bird ownership and dog ownership increased.
6. Youth with horses or large animals for pets were more likely to live in rural areas.
7. Pet ownership did not seem to suggest a better perceived relation with parents.
8. Parents viewed caring for animals as beneficial.
9. Early adolescent animal owners were more likely to have a higher self-esteem.
10. An animal owner was more likely to be a club member.

Information. For additional information contact: Leah Hoopfer, Program Leader, Michigan 4-H Youth Programs, 6 Berkey Hall, Michigan State University, East Lansing, Michigan, 48824, Telephone: (517) 355-0180.

KEITH, Joanne and HOOPFER, Leah, "Michigan Early Adolescent Survey: Final Report," Michigan State University, East Lansing.

Purpose. The overall purposes of the survey were to (1) develop a profile of Michigan early adolescents that focused on out-of-school time and included biological, psychological, and sociological information; (2) develop a profile of families which included early adolescents; (3) Assess the developmental needs of Michigan Early adolescents and their families; (4) identify how early adolescents used their out-of-school time and how they would like to use it; (5) gain information related to specific 4-H - Youth Programs topics.

Method. Data were the results of a state-wide survey of 304 early adolescents and their parents conducted in 1983. Youths were interviewed in their homes and parents responded to a questionnaire. Subjects were selected using a stratified multi-stage cluster sampling technique.

Findings. Highlights of the descriptive findings are:

SELF-ESTEEM:

60 percent of the youths reported positive feelings about their general self-esteem.

73 percent of the youths reported positive feelings about their peers.

72 percent of the youths reported positive feelings about their parents and families.

CAREER EXPLORATION:

90 percent of the youths had thought about what kind of job they would like.

Parents had talked more about sons' future careers than daughters.

Boys preferred traditionally male jobs; girls preferred traditionally female jobs.

Over 50 percent of boys and girls said that they would like to be computer programmers.

FAMILY RELATIONSHIPS:

94 percent of the youths said that they felt close or very close to their mothers; 86 percent said the same about their fathers.

YOUTH GROUPS:

Most early adolescents belonged to some kind of youth group.

75 percent of the youths joined the group because of its interesting and fun activities.

The youths reported learning skills and knowledge (70%), responsibility (33%), and meeting new friends (33%) in their youth groups.

Parents reported that their child gained social skills, subject knowledge and skills, personal skills, and self-esteem.

Information. For additional information, contact: Joanne Keith, Associate Professor, Department of Family Ecology, 203 Human Ecology, Michigan State University, Telephone: (517) 353-7860 or Leah Hoopfer, Program Leader, Michigan 4-H Youth Programs, 6 Berkey Hall, Michigan State University, East Lansing, Michigan 48824, Telephone: (517) 355-0180.

HASTINGS, Shirley W. "4-H Calculating Consumer Project: Its Effect on Members' Knowledge, Attitude, and Behavior." Dissertation, Doctor of Philosophy, 1985, Oklahoma State University, Stillwater.

Purpose. The purpose of this quasi-experimental study was to assess the impact of the 4-H Calculating Consumer Project (levels IV-VI) on Oklahoma 4-H members' knowledge of consumer education, their attitudes regarding consumer practices, and their adoption of positive consumer practices.

Method. A stratified random sample of 19 4-H clubs composed of 399 Oklahoma boys and girls, 12 to 15 years of age, was randomly assigned to the control group (10 clubs) and the experimental group (9 clubs). The research was conducted in four phases. The first phase was the development of the 4-H Calculating Consumer Project materials. The second phase involved the development of parallel forms (A and B) of the Calculating Consumer Knowledge, Attitude, and Practice Adoption Test, the Measure of Volunteer Commitment Scale (MOVC), The Member Personal Data Sheet, and the Leader Personal Data Sheet. During the third phase, Form A of the pretest and the Member Personal Data Sheet were given to all participants. A minimum of 12 hours of Calculating Consumer Project instruction was given to the experimental group. Form B of the posttest was then administered to the control and experimental groups. Phase four occurred three months following the posttest when the delayed posttest, Form B, was administered to the experimental group.

Findings. Data analysis showed no significant difference in pretest scores between control and experimental groups, indicating an equivalence of groups prior to participation in the Calculating Consumer Project. Statistical analysis using t-tests revealed significant differences ($p=.0001$) in posttest scores between the experimental and control groups in knowledge, attitude, and practice adoption. Volunteer commitment level, as measured by the MOVC, was similar for all volunteer project leaders. The 4-H Calculating Consumer Project (levels IV-VI) appears to be an effective curriculum for Oklahoma boys and girls, ages 12-15. The positive effects of the project materials remain significant three months following the conclusion of instruction. Implications of the research for theory and practice are: 1) Volunteers can be effective in delivery of educational programs for youth, 2) Consumer education concepts can be taught to pupils of various ages, and 3) Educational interventions can positively influence knowledge, attitude and practice adoption.

Information. For additional information, contact: Shirley W. Hastings, 4-H Youth Development Specialist, P. O. Box 5406, Mississippi State, Mississippi 39762, Telephone: (601) 325-3350.

## MONTANA

MCMASTER, Susan Lynn. "Perceptions of 4-H Members, Leaders and County Agents Toward the Montana 4-H Vegetable Gardening Projects." Thesis, Master of Science, 1985, Montana State University, Bozeman.

Purpose. This study was designed to investigate the perceptions of 4-H members, 4-H leaders and county agents toward the Montana 4-H vegetable gardening projects with respect to experience and skills they felt were important to the projects, instructional materials, weaknesses and strengths of the projects, and recommendations for change or improvement of the project.

Method. Data for the study were gathered through the use of mailed questionnaires sent to a random sample of 35 county agents, 60 4-H leaders and 145 4-H members. The 4-H leaders and members lived in the same counties as the selected county agents. The validated questionnaires were designed to gather demographic information to aid in identifying and characterizing the respondents, and the information about the perceptions of the respondents with respect to activities and skills they felt were important to the project, instructional materials, project weaknesses and strengths and recommendations for change or improvement of the program. Frequencies, percentages and general statistics were obtained when analyzing the data.

Findings Based on the results of the study, it was concluded that skills that could be acquired through participation in a 4-H vegetable gardening project were important, use of specific vegetable gardening bulletins was low, the bulletins that had been used by the respondents were rated as being very helpful or helpful, participation in certain 4-H activities was low and goals established at the state and national level were accomplished by 4-H members. Acquiring the knowledge and developing the skills needed to care for and manage a well planned vegetable garden project were strengths of the gardening projects and too little emphasis on the basics of vegetable gardening were weaknesses of the Montana vegetable gardening projects.

Recommendations for improvement of the gardening projects included: detailed project manuals need to be made more aware of the vegetable gardening bulletins available and 4-H members need to become aware of the experiences in gardening projects and related activities: demonstrations, judging, tours and exhibits.

Information: For additional information, contact: Doug Bishop, Professor, Agricultural and Industrial Education, Montana State University, Bozeman, Montana 59717, Telephone: (406) 994-3691.

PETROFF, Arthur R. "Attitudinal Differences: A Study Comparing 4-H Members and Dropouts, Ages 13 to 15, in 16 Montana Counties." Professional Paper, Master of Science, 1984, Montana State University, Bozeman.

Purpose. The problem associated with this study was to determine whether certain attitudes of active Montana 4-H members and dropouts, ages 13 to 15, are different and to identify reasons associated with dropping out of the 4-H program.

Method. The instrument was developed by the researcher and was sent to 491 present and 410 past 4-H members who were 13 to 15 years of age when enrolled in 4-H. This study included 16 counties in Montana. The data in this study were tested using the Person r correlation coefficient and the Chi-squared test of independence.

Approximately 66% of the sample responded with about 60% actually being used. Approximately 52% of the respondents were from farm and ranches while 48% were from urban domiciles.

Thirty-three hypotheses were tested in this study. The results of this testing indicated that an urban or rural domicile made no difference in the respondent's attitude that 4-H was mainly for people from farms and ranches. In addition, age was found to be negatively correlated to length of 4-H membership. The data also indicate that attitudinal differences existed between active 4-H members and dropouts in the areas of: (1) responsibility-building in 4-H, (2) 4-H and 4-H projects being fun and interesting, (3) recommending 4-H to others, (4) parental attitude toward 4-H, (5) 4-H being time consuming, (6) 4-H record books, (7) peer attitude toward 4-H, (8) parental pressure to stay in 4-H, (9) membership in school organizations, (10) 4-H program repetition, (11) help received in 4-H, (12) interest in school and 4-H, (13) member voice in 4-H planning, and (14) peer influence to quit 4-H. The two main reasons given for dropping out of 4-H were: (1) I had too many other things to do, and (2) the club was not very organized.

The major conclusions drawn from this study are that: (1) 4-H may not be for every youth but the 4-H program should explore ways to broaden its appeal while retaining its 4-H image, (2) 4-H and school will vie for young people's time and (3) family participation in 4-H is important to 4-H member retention.

Information. For additional information, contact: Reeves Petroff, Gallatin Weed Supervisor, Bozeman, MT. 59715. Telephone: (406) 587-9619.

GOODDING, Richard D. "Accident Study of Three Wheel All-terrain Vehicles." Staff Report, 1984, University of Nebraska-Lincoln.

Purpose. The purpose was to identify through a needs assessment if there was a need for programs in Cooperative Extension for programs relating to the safety of three-wheel all-terrain vehicles.

Method. The study consisted of two parts. Part 1 was an open-ended questionnaire to Extension agents-agriculture in each Nebraska county. The questions asked reflected the agents feelings about (a) the number of three-wheelers in the county; (b) the age and safety practices of those using the vehicle, and (c) accidents which had occurred. Part 2 was a random telephone survey to 419 farmers and ranchers across Nebraska which sought information about (a) how the 3-wheeler was used, (b) who the drivers were, (c) frequency of carrying passengers, (d) the use of helmets, (e) use on public roadways, (f) accidents which have occurred, and (g) insurance coverage.

Findings.

--The ages of the drivers ranged from 6 to 77 years and 36% of the drivers were 4-H age or younger.

--Over half (53%) of the three-wheelers are driven on county or state roads.

--Over half (59%) reported that passengers are carried on their three-wheeler.

--93% of the drivers never wear helmets.

--22% carry no insurance on their three-wheeler; 68% felt they were covered via comprehensive, general liability policy; and 10% carried either a recreation vehicle policy or a motorcycle policy.

Information. For additional information, contact: Kay Rockwell, Evaluation Specialist, 216 Agricultural Hall, University of Nebraska-Lincoln 68583-0703, Telephone: (402) 472-3431.

# NEBRASKA

ORR, John D. "History of 4-H in Nebraska." Four-H publication 156, Cooperative Extension Service, 1985.

*Purpose*. The purpose of the project was to put down in printed form, in as much detail as possible, the history of 4-H in Nebraska including its beginning as Boys' and Girls' Club Work and eventual transition to 4-H. The publication also documents the commitment of the Cooperative Extension Service to 4-H. The publication serves as a benchmark for the history of Nebraska events such as Nebraska State 4-H Conference, National 4-H Conference, camping, fairs and shows, international 4-H, University 4-H, Nebraska Association for 4-H Development, and other 4-H related items. The history lists Nebraska's oldest living 4-H alumni, multi-generation 4-H families, 4-H clubs with over 35 years of service, and volunteer leaders with over 35 years of service.

*Method*. Library, *Nebraska Farmer* magazine issues, Nebraska Historical Society, Cooperative Extension Service archives, 4-H annual reports, and county files were searched for information. Three stories in the *Nebraska Farmer* appealing for information were especially helpful.

*Findings*. E. C. Bishop began the process of the formation of a Boys' and Girls' Club in Middle Creek Grade School in 1893. In 1905, the first statewide meeting of Boys' and Girls' Clubs was held and attracted over 500 participants. Bishop became the Nebraska State Superintendent of Schools in 1909. In 1911, he moved to Iowa where he was to serve as the State Leader for junior work throughout the Iowa Department of Education.

*Information*. For additional information, contact: John D. Orr, Extension Specialist--4-H, 116 Agricultural Hall, UNL - East Campus, Lincoln, Nebraska 68583-0700, Telephone: (402) 472-2838.

## NEBRASKA

ORR, John D., "Self Concept, 4-H Camp Setting." An evaluation, Cooperative Extension Service, 1985.

*Purpose*. The purpose was to: 1) define the term self concept, 2) to determine what affects self concept, 3) to measure the effect of a five-day educational workshop held in an outdoor setting on the self concept of participants.

*Method*. The *Tennessee Self Concept Scale, Clinical and Research Form* was administered twice in the same form as a pre/post-test to the 75 participants of the 1985 Biology Career Workshop. The Clinical and Research forms were hand scored. A program/analyst, Biometrics and Information Systems Center, assisted in designing the computer program for the study. The analysis included N, Mean, Standard Deviation, Standard Error, T Statistic, and Degrees of Freedom, Probability > T.

*Findings*. The results indicated that the 75 youth attending the Biology Career Workshop increased their concept of self. The following findings were statistically significant: 1) *total P score*, 2) Internal frame of reference including *behavior*, *self satisfaction*, and *identity*, 3) External frame of reference including personal self and social self. Three sub categories in the external frame of reference were found not to be statistically significant. They were: physical self, moral/ethical self, and family self.

*Information*. For additional information, contact: John D. Orr, Extension Specialist--4-H, 116 Agricultural Hall, UNL - East Campus, Lincoln, Nebraska 68583-0700, Telephone: (402) 472-2838.

NEBRASKA

ORR, John D. "Quality Indicators, 4-H Club Delivery Method." An evaluation, Cooperative Extension Service, 1984.

Purpose: 1) To identify quality indicators for the 4-H Club delivery mode, 2) to measure the contact hours of Nebraska 4-H leaders with youth, 3) to measure the financial contribution of 4-H leaders to the 4-H club program, 4) to gain demographic data relating to leaders and 4-H clubs, 5) to measure how decisions are made in 4-H clubs, 6) to measure how members understand their progress in 4-H, 7) to measure the degree of parent involvement in 4-H meetings, and 8) to measure respondents' attitudes toward selected indicators of quality; economic benefits; self worth; extended program content; life skills; leadership skills; societal skills; and personal involvement.

Method. A questionnaire was mailed to a stratified random sample of Nebraska 4-H leaders. Questionnaires were mailed to 230 4-H leaders. There were 194 (84%) questionnaires returned. Of those questionnaires returned, 28% were male and 72% female. Data was collected and an analysis made.

Findings: The findings reflected the objectives for the evaluation. If a composite 4-H club were described for Nebraska, it would be a group of twenty members and two parents. The club would meet in the spring and summer and take two projects per member. The club would meet in homes ten times each year for a period of two hours per meeting. Club decisions are made through officers and parliamentary procedure. Leaders spend an average of 326 hours per year accomplishing tasks.

Information: For additional information, contact: John D. Orr, Extension Specialist--4-H, 116 Agricultural Hall, UNL - East Campus, Lincoln, Nebraska 68583-0700, Telephone: (402) 472-2838.

ORR, John D. and NELSON, Kenneth L. "4-H Impact, Nebraska Home Extension Club Members." An evaluation, 1985.

Purpose. The purpose was to determine: 1) what 4-H Home Economics Programs have been of most value, 2) the extent to which 4-H Home Economics Programs help to prepare persons for adult roles, 3) the extent to which 4-H Home Economics Programs teach persons life skills and how to use those skills in chosen professions, 4) the impact of 4-H on persons assuming community responsibilities.

Method. The study repeated a South Dakota survey completed by Kenneth L. Nelson, 4-H/Youth Specialist, South Dakota Cooperative Extension Service. In the Nebraska study, the Nebraska State Council of Home Extension Clubs provided a list of members/officers. A random sample of those lists were sent a questionnaire with a return of 51 percent. The questionnaire analysis provided for demographic data, mean scores, and comments from participants.

Findings. Those responding ranked those 4-H home economics projects that had been of most value to them. Both the South Dakota and Nebraska studies indicated similar rankings. The top five Nebraska projects were: Foods and Nutrition, Clothing and Textiles, Bread Making, Food Preservation, and Home Environment. Four-H was seen as: 1) a chance to learn leadership responsibilities, 2) a community educational program, 3) important to the community, 4) important to adults who receive 4-H leader subject matter training. Of least value to them was career information received.

Information. For additional information, contact: John D. Orr, Extension Specialist--4-H, 116 Agricultural Hall, UNL - East Campus, Lincoln, Nebraska 68583-0700, Telephone: (402) 472-2838.

HUAPALLO, Hugo A. "Task Performance and Perceived Training Needs of North Dakota 4-H Ambassadors," Master of Science Colloquium Paper, 1984, North Dakota State University, Fargo, North Dakota.

Purpose. The purpose of this study was to identify leadership tasks which North Dakota 4-H Ambassadors felt appropriate for them to perform and to determine their ability to perform those tasks.

Method. The population of the study was the seventy-three North Dakota 4-H Ambassadors. All of them constituted the sample.

A questionnaire was developed and sent to each 4-H Ambassador. Sixty-six or 90.41 percent of the questionnaires were returned. Sixty-five or 89.04 percent were usable.

Frequencies, percentages, and averages were determined in analyzing the data.

Findings. Some of the findings include the following:

(1) The North Dakota 4-H Ambassadors are mostly rural youth consisting of two-thirds female; college students with seven or more years of experience as a 4-H member; and four or less years as a 4-H Ambassador.

(2) A majority of 4-H Ambassador respondents felt the 65 given leadership tasks were appropriate for them to perform. Sex of respondents did not have noticeable influence in their responses.

(3) Only organizational, project leadership and planning related tasks were performed by a majority of responding ambassadors even though they said that most of the 65 leadership tasks were appropriate for them to perform. Self-improvement and 4-H promotional tasks were performed by about one-third of the respondents. Sex of ambassador respondents did not have noticeable influence on their responses though females performed slightly more ograniza-tional and project leadership tasks than males.

(4) A majority of the responding 4-H Ambassadors reported as being well prepared to perform half of the sixty-five given leadership tasks. Organizational, project leadership, and planning related tasks were those in which a majority of the respondents felt well prepared, while only a few of them felt well prepared in self-improvment and 4-H promotional tasks. Females reported as being slightly better prepared than males.

Information. Dr. Vernon D. Luft, Agricultural Education Department, North Dakota State University, Fargo, ND. Telephone: (701) 237-7439.

CAPLINGER, Cheryl L. "Factors Related to Reenrollment in 4-H of Eight- Through Twelve-Year-Old Members." Thesis, Master of Science, 1984, The Ohio State University, Columbus.

Purpose. The purpose of the study was to identify factors which are related to the reenrollment of 4-H members in 1983. Eight- through twelve-year-old reenrollees were compared to non-reenrollees in the same age group to determine if relationships existed between selected factors and their reenrollment status.

Method. The target population was all traditional 4-H club members in Ohio in 1982, ages 8 through 12. A stratified random sample was taken from 10 counties, two randomly selected counties from each Extension district. A total of 400 members was included in the study. A mailed questionnaire was used to collect information from the participants.

Findings. Substantial relationships were identified between two characteristics and reenrollment in 4-H. These were the years of club membership and planned membership in 4-H in the subsequent year of 1984. Seven factors showed a moderate relationship with reenrollment. These were earning money from 4-H projects, liking project work, 1983 4-H enrollment of siblings, parents' attendance at club meetings, participation in county fair, member's attendance at club meetings and desire to be a Junior Leader. The remaining characteristics investigated had a low or negligible relationship with 4-H reenrollment.

Information. For additional information, contact the Department of Agricultural Education, The Ohio State University, 2120 Fyffe Road, Columbus, OH 43210-1099, telephone 614-422-6321.

KOLEADE, Richardson A. "Effective Communication Media for Potential Minority 4-H Youth in Franklin County as Perceived by the County 4-H Minority Advisors." Project, Master of Science, 1985, The Ohio State University, Columbus.

Purpose. The purpose of this study was to identify the communication media/method that could be effectively used by 4-H in reaching the minority youth of 4-H age residing in Franklin County (Columbus) as perceived by the county's 4-H minority advisors, and to describe the relationship between their perceptions and selected personological characteristics.

Method. A census was conducted of the 37 4-H minority advisors in the county using a researcher-developed questionnaire for which content validity and reliability were established. The instrument assessed perceptions in the areas of personal contact, radio, television, newspapers and miscellaneous media with 21 items using a 4-point, Likert-type scale. Twenty-four (65%) of the subjects responded after two mailings and follow-up phone calls. Descriptive statistics were used to summarize and analyze the results.

Findings. All responding advisors were female and most between 35 and 39 years of age, two years of service was the most common length of service as an advisor, and most (92%) were black. Most were employed outside the home, lived in urban areas, had completed college, and did not have children enrolled in 4-H.

The seven perceived highest ranking media were: (1) school visits, (2) advertisements on "MTV" or children's channels, (3) television feature programs on 4-H, (4) ads on "rock" stations, (6) televisions public service announcements, (6) peer contact, and (7) radio special feature programs. The three lowest perceived rankings were radio public service announcements, billboard/roadmarkers, and newspaper advertisements.

Correlations between personological characteristics and perceptions were not high and did not help explain to any great extent the variability in perceptions.

Information. For additional information, contact: Larry E. Miller, Department of Agricultural Education, 208 Agricultural Administration Building, 2120 Fyffe Road, The Ohio State University, Columbus, Ohio 43210-1099, Telephone: (614) 422-6672.

MATULIS, J. K. "Perceptions of 4-H Alumni from Four Ohio Counties Concerning the Impact of 4-H on Their Career Development." Thesis, Master of Science, 1984, The Ohio State University, Columbus.

Purpose. The purpose of this study was to identify the perceptions of 4-H alumni from four Ohio counties concerning the impact of 4-H on their career development, as well as their current education/occupational and 4-H involvement characteristics. Relationships among the perceptual variables and the two types of characteristic variables also were examined.

Method. The frame of the study was 883 Ohio 4-H alumni from Hancock, Darke, Portage, and Licking counties who were 17- and/or 18-year-old members as of January 1, 1977 through January 1, 1979. A researcher-developed, three-part questionnaire was mailed to a proportionate, stratified random sample of 275 subjects from this population. Responses of early and late respondents were compared using t-tests to estimate the perceptions and characteristics of the non-respondents.

Information obtained from the demographic and perceptual items was analyzed using frequency distributions, percentages, means and standard deviations. Relationships were determined at an alpha level of .05. The Pearson correlation coefficient, Spearman rank correlation coefficient, point-biserial correlations, and Cramer's V statistic, were used to describe the correlations between variables.

Findings. Alumni felt that 4-H had much impact on their self-awareness, particularly concerning positive interests and abilities. Four-H tended to have much impact upon the development of general work competencies reflecting humanizing skills and good work habits. However, 4-H had very little impact in the development of job-seeking skills related to interviews, applications, and resumes. Alumni perceived 4-H as having great impact on general career awareness and less impact on more specific areas of career exploration and selection. However, county 4-H agents, 4-H leaders, and other 4-H members were perceived as having very little impact on alumni career planning. As the number of 4-H career education activities or projects in which the alumni were involved increased, the perceived impact of 4-H on work competency development and career awareness, exploration and selection tended to increase. The more active the alumni perceived themselves as 4-H members, the greater the perceived impact of 4-H on work competency development tended to be.

Information. For additional information, contact: Lowell E. Hedges, Department of Agricultural Education, 208 Agricultural Administration Building, 2120 Fyffe Road, The Ohio State University, Columbus, Ohio 43210-1099, Telephone: (614) 422-6671.

# OHIO

MILLER, Juanita E. "The Relationship Between the Extent to Which a County is Rural or Urban and Characteristics of the County's 4-H Program. Ph.D. Dissertation, 1985, The Ohio State University, Columbus.

*Purpose*. The purpose of this study was to investigate the extent to which the current 4-H program in Ohio is serving urban clientele in the counties. This was accomplished by studying the relationship between characteristics of the county indicating the degree to which it is urban or rural with the characteristics of the 4-H program offered in the county.

*Method*. The sampling units for this study were the 88 counties of Ohio and the sources of data were the *1980 Census Data*, the *Ohio 4-H Statistical Report*, October 1, 1982 - September 30, 1983, Extension's Annual Narrative Reports," July 1, 1982 - June 30, 1983, and the "Ohio Cooperative Extension Service - Local Needs Survey."

*Findings*. The conclusions of this study are that Cuyahoga, Hamilton, Franklin, Montgomery, Lucas and Summit counties have 90% or higher urban population and a total of 31 counties have 50% or higher urban population. There is a very strong negative relationship between the extent to which the county is urban and the percent of potential 4-H members reached. There is a low positive relationship between the extent to which the county is urban and the percent of females enrolled in the program. There is a moderate relationship between the extent to which the county is urban and the percent of non-white 4-H members enrolled in the program. There are moderate to substantial negative relationships between the extent to which the county is urban and the percent of 4-H members residing on farms and in small towns. There is a substantial relationship between the percent to which the county is urban and the percent of 4-H members residing in suburbs and central cities of over 50,000 people. There are negligible negative relationships between the extent to which the county is urban and the percent of 4-H members enrolled in clubs and school programs. There is a low positive relationship between the extent to which the county is urban and the percent of 4-H members enrolled in special interest groups.

There are no consistent relationships in direction or magnitude between the characteristics of the 4-H program and the program users' perceptions about the degree of emphasis that should be placed on selected 4-H program areas.

*Information*. For additional information, contact: Dr. Juanita E. Miller, Extension 4-H Specialist, The Ohio Cooperative Extension Service, 2120 Fyffe Road, The Ohio State University, Columbus, Ohio 43210-1099, Telephone: (614) 422-4444.

MYERS, Kristin K. "Draft Horse." Project, Master of Science, 1985, The Ohio State University, Columbus.

*Purpose*. The purpose of this project was to develop a 4-H Project Book on draft horses.

*Method*. Literature and other authoritative sources were consulted to develop a publication at the appropriate reading level to be useful to 4-H members. Content was authenticated and validated by authorities in the field. Pictures and line art were utilized to enhance learning and student interest. The project was printed by the Ohio Cooperative Extension Service.

*Findings*. The 24 pages of well-illustrated content was sub-divided into appropriate content areas of: Breeds of Draft Horses; Draft Horse Conformation and Selection (General appearance, Head and neck, Forequarters, Body, and Hindquarters); Draft Horse Nutrition (Feedstuffs for horses, Suggested balanced rations, and Guidelines for feeding draft horses); Shoeing; Harness, Harnessing and Hitching; Teaching the Draft Horse to Drive; and Fitting and Showing.

*Information*. For additional information on this "For Sale" publication, contact: Ohio Cooperative Extension Service, The Ohio State University, 2120 Fyffe Road, Columbus, Ohio 43210-1099, Telephone: (614) 422-2011.

# OKLAHOMA

VICK, Ronald L. "4-H Leaders' and 4-H Members' Attitudes Toward Selected Aspects of the 4-H Program in Pittsburg County." Thesis, Master of Science, Oklahoma State University, Stillwater.

Purpose. The purpose of the study was to gain information about the attitudes of 4-H members and 4-H leaders toward selected aspects of the 4-H program in Pittsburg County.

Method. One hundred eight 4-H members and thirty leaders' response to the questions were utilized. Members and leaders selected the main statement relating to why 4-H'ers participated and why 4-H'ers did not participate in county activities. Activities studied were: Share-The-Fun; County Rally; Boys and Girls Dress Revue; and County Fair. Item counts, percentages and rankings were used to represent the comparisons of the responses were made and deduction to the most significant factors made.

Findings. 4-H'ers participated in county 4-H activities because they felt it would help develop their leadership skills and help them with their personal development. These were found to be the predominant reasons for their participation in county activities. Leaders and parents had the least influence on decisions made by the 4-H members in this study. Lack of interest was found to be the main reason why 4-H'ers did not participate. 4-H activities helped make a change in 4-H'ers attitude for the betterment of themselves, and helped 4-H'ers gain confidence in themselves and their abilities. Also, 4-H members enjoy the county 4-H activities.

Information. For additional information, contact: Ronald L. Vick, County Extension Agriculture Agent, Okfuskee County, Box 107 Fairgrounds, Okemah, Oklahoma 74859, Telephone: (918) 623-0641.

PENNSYLVANIA

ROBBINS, Earl D. "The Development of a Pennsylvania 4-H Wildlife Conservation Leader's Guide Using Task Sheets." Paper, Master of Education, 1985, The Pennsylvania State University, University Park.

Purpose. The purpose of the study was to examine and revise The Pennsylvania 4-H Wildlife Conservation Leader's Guide. The revised guide was designed to include sources of instructional resource materials and a number of 4-H wildlife club activities using task sheets.

Method. A sample of 4-H Extension Agents and 4-H wildlife project leaders was identified and asked to submit activities and materials that they would recommend to be included in the guide. Those responding indicated that a major revision of the Leader's Guide was needed. Their major concern was the lack of suggested wildlife conservation activities and instructional materials.

Findings. After contacting several wildlife conservation agencies and organizations and compiling lists of the resource materials available, the author revised the guide. Several wildlife task sheets were added to the guide that may be used for 4-H wildlife club activities. These include: "Developing a Natural Spring Seep", "Pruning and Fertilizing Old Apple Trees for Wildlife Food", "Planning for Backyard Wildlife", "Building a Bluebird Nest Box", "Planting Trees and Shrubs for Wildlife", and "Building an Automobile Tire Den for Squirrels."

The revision of the guide was then evaluated by a panel of experts consisting of 4-H wildlife project leaders, 4-H Extension Agents, 4-H and Wildlife Faculty at The Pennsylvania State University and personnel at the Pennsylvania Game Commission. Their comments were collected and synthesized and then incorporated into the revised edition of The Pennsylvania 4-H Wildlife Conservation Leader's Guide.

Information. For additional information, contact: Earl Robbins, Extension Agent, Tioga County Extension Office, 118 Main Street, Wellsboro, PA 16901, Telephone: (717) 724-1906.

SCHOONMAKER, Rosemarie. "Development of a 4-H Hydroponics Project." Paper, Master of Education, 1984, The Pennsylvania State University, University Park.

Purpose. The purpose of this paper was to develop a hydroponics project to be used by 4-H horticulture youth in Pennsylvania. The project was targeted at those teens who had completed some basic horticulture projects and were ready for a more advanced project. The intent of the project was to educate youth about hydroponics. The project included development of both a member's guide and a leader's guide.

Method. The study was to develop a hydroponics guide that met the following criteria: (1) the guide provides information for the participant to set-up and monitor a hydroponics experiment; (2) the guide describes the benefits and limitations of growing plants hydroponically; and (3) the guide contains information for the participant to set-up hydroponic gardening for supplementing the home food supply or to expand into small-scale commercial production.

Findings. The product of this developmental paper consisted of two 4-H project guides for hydroponics. The 4-H Member's Hydroponics Guide focused on the set-up, monitoring, and evaluation of two hydroponic gardening experiments with lettuce or tomatoes. The experiments demonstrate two methods of hydroponic culture and the advantages and disadvantages of each. Participants learn the merits of good management, precision measurement, good recordkeeping, and the basic techniques used in hydroponics. Commercially prepared fertilizers are used for simplicity. Homemade equipment is used to demonstrate that there are economical alternatives to costly commercially available systems.

Information. For additional information, contact: Anne Heinsohn, Department of Agricultural and Extension Education, The Pennsylvania State University, University Park, PA 16802, Telephone: (814) 863-0387.

## PENNSYLVANIA

SUSO, Saney B. "Impact of 4-H Activities in Leadership, Personal, Technical Skills, Social and Value Development." Paper, Master of Education, 1984, The Pennslyvania State University, University Park.

Purpose. The purpose of this study was to describe the impact of participation in 4-H teen development activities on members of local 4-H clubs. The specific objectives of the study were to describe selected demographic characteristics and to determine the knowledge, skills, and/or attitudes of all of those sampled from five counties in Pennsylvania.

Method. The study was a descriptive survey. Data were collected from 125 4-H teen members from each of five Pennsylvania counties. A five-part questionnaire was developed and each 4-H teen member in the sample was sent one. Overall, 51 percent of the questionnaires were returned and approximately 50 percent were usable.

Findings. Age, leadership role, and number of years enrolled were found to provide significant different scores on values development; thus, there was reason for the rejection of the null hypothesis. The older the members, the greater their leadership role experiences. The longer they had been in 4-H, the higher their value scores. Differences between scores by sex were not found to be significant and hence the mean scores for males was no different from that of the females.

Differences in personal development among age, sex, and number of years enrolled were not found to be significant and, therefore, the null hypothesis was accepted. There was reason to believe that personal development was not influenced by age, sex, or number of years in 4-H. Differences in leadership role were found significant. As leadership role increases, members' scores on personal development increases. Analysis of technical development scores indicated that age, sex, and number of years enrolled have no influence on the technical development scores. However, leadership role was significant. As members' leadership role increase, their technical development scores increased as well. Differences among social development scores were not significant for the variables tested. Analysis of leadership development scores indicated no significant differences between leadership development scores indicated no significant differences between leadership development scores acording to age, sex, and number of years enrolled. Differences in scores as a result of leadership role, however, were significant.

Information. For additional information, contact: M. Joy Cantrell, Department of Agricultural and Extension Education, The Pennsylvania State University, University Park PA 16802, Telephone: (814) 863-0387.

BURKETT, M. Sexton and BARRETT, J. David. "4-H Camping: Does It Develop Life Skills?" A Research Paper, 1985, Virginia Polytechnic Institute and State University, Blacksburg.

Purpose. The purpose of this study was three-fold. Objective one was to describe 4-H'ers in terms of ten demographic variables. Objective two was to compare scores of the two study groups on ten 4-H survey items. Objective three was to determine the relationship between demographic variables and the 4-H survey items.

Method. A mail survey instrument was prepared and mailed to 1,159 4-H'ers to collect data on 10 characteristic variables and 10 4-H related items. A bumper sticker entitled, "I Love 4-H," was included in the mailing to increase the response rate. After one follow-up to non-respondents, a total of 513 usable surveys (treatment=317, control=196) were returned for a 44.3% return from the total population.

Findings. The study results for objective one indicated that the treatment and control groups of 4-H'ers were the same age, were predominantly female, were enrolled as in-school 4-H members and had a predominantly rural background. Four-H'ers who had camped were more likely to have a parent or guardian who had been both a 4-H member and a 4-H volunteer than 4-H'ers who had never camped.

The findings for objective two indicated that 4-H'ers who had camped, when compared to 4-H'ers who had not camped, knew more 4-H'ers by their first name, had worked on more 4-H projects, had performed more leadership roles, had worked on more 4-H project books, had completed more 4-H project books, had learned more skills, held an overall more positive feeling toward 4-H, and were more willing to continue their involvement with 4-H.

In general, the demographic variables were not strongly associated with the 4-H survey items. In most cases, the relationships were low thus indicating only tendencies in certain directions. Age and years in 4-H were the two variables most related to the 4-H survey items. These two variables were each related to eight survey items. Years at 4-H camp were related to seven items; place attended 4-H meetings and if parent or guardian had been a 4-H volunteer were each related to six survey items; sex was related to five items, if parent or guardian had been a 4-H member was related to two items; residence was related to one item; race was not related to any of the survey items.

Information. For additional information, contact: Sexton Burkett; Program Leader, 4-H; 310 West Valley Street; Abingdon, VA 24210, Telephone: (703) 628-6033.

HILLE, Lisa D. "A Guide for the Planning, Implementation and Evaluation of 4-H Camp Counselor Training." Special Problem, Master of Adult and Continuing Education, 1985, Washington State University, Pullman.

Purpose. The purpose of this study was to develop, implement and evaluate a practical and effective counselor training for the Clallam County 4-H summer camp counseling staff; offering a guide for other 4-H or youth camp directors to follow. The program developed was a weekend training retreat held at Camp David, Jr. on Lake Crescent in the Olympic National Forest of Washington state. The counselor training was divided into three key areas which combine skill and attitude development: 1) human relations, leadership and guidance skills, 2) campcraft skills, and 3) planned program activities. The objectives of the study were: 1. To determine the training needs of counselors in the area of human relations, guidance and leadership skills, campcraft skills, and planned program activities. 2. To identify and review existing materials on counselor training. 3. To outline counselor training concepts and skills which may be included in a camp staff training. 4. To develop, implement, and evaluate a camp counselor training program for counselors 14-19 years old. 5. To provide a guide for other 4-H or youth camp directors to follow when planning a similar program.

Method. Objectives to be met in the program were developed from a needs assessment which was conducted in two forms. Felt needs were analyzed from the evaluations by the Clallam County 4-H camp staff of 1983. Unfelt needs were determined through a study of recommendations by experts in the field of similar existing programs and materials in the area of camp counselor training.

Findings. Two evaluations took place. They were:
1. Evaluation of program upon completion of training.
2. Evaluation of the skills learned at the training and their effectiveness upon completion of the week of camp.

The purpose of this study was to outline steps which were taken in the development, implementation and evaluation of a 4-H camp counselor training; providing a guide and suggestions for other camp directors or youth program directors to follow if and/or when they would become involved in similar programs.

Information. For additional information, contact:
Lisa D. Hille, 422 East Bay Drive, Apt. 27, Olympia, Washington 98501.

# WASHINGTON

HOLTROP, Joe E. "Development of a Soils Curriculum for the 4-H Challenge Natural Resources Project." Special Problem, Master of Adult and Continuing Education, 1985, Washington State University, Pullman.

Purpose. The national pilot 4-H CHALLENGE Natural Resources Project was initiated at Washington State University in 1983. This project involved the development of an integrated 4-H natural resources curriculum which included the following eight natural resource systems: air, energy, forests, geology and minerals, range, soil, water, and wildlife. The purpose of this study was to develop a soils curriculum as an integral component of the 4-H CHALLENGE Natural Resources Project.

The objectives of this study were to: (1) Identify and describe criteria for developing a 4-H natural resources curriculum. (2) Develop a list of the most important soils concepts to be learned by 4-H CHALLENGE members. (3) Develop and organize learning experiences and curricula materials to comprise the soils content area of the CHALLENGE Program including: (a) activities that will enable 4-H members to learn soils concepts; (b) descriptions of projects that deal with soils problems and issues for CHALLENGE members to participate in.

Method. Twenty-seven soils concepts were developed based on a review of soils educational literature and interviews with soil scientists.

Findings. Existing learning activities were selected from the literature and new ones were developed to teach the soils concepts. Five projects were developed to provide 4-H members with an opportunity to use the knowledge and skills they had acquired during the learning activities and responsibly take action to solve soil related problems in the community.

Information. For additional information, contact: Master of Adult and Continuing Education program, Washington State University, Pullman, Washington, 99164-6236, Telephone: (509) 335-2998.

# WEST VIRGINIA

**TUMUSIIME**, Edward K. "Problems that Hamper Success of County 4-H Programs." Master of Science Thesis, 1983, West Virginia University, Morgantown.

Purpose. The purpose of this study was to identify specific problems in initiating and operating 4-H youth activities which most seriously hamper success of county 4-H programs as perceived by 4-H State Leaders and by 4-H Program Specialists.

Method. Data were obtained from 4-H State Leaders and Program Specialists through a modified delphi technique. All state leaders were included in the study. One program specialist from each state was selected randomly to participate in the study. In the initial survey, each participant was asked to identify the five specific problems in initiating and operating 4-H youth programs which, in his/her opinion, most seriously hamper success at the county level. Responses were edited, condensed and combined into the 74 ratable statements which made up the questionnaire for the second instrument. The second instrument was sent to the original population and asked each participant to rate severity of each of the problems listed. A total of 70 responses (71 percent) were recorded and used in the study.

Findings. Of the 74 problems identified by participants, nine were rated as "very important." Considered particularly serious were: Staff do many things volunteer leadership should do; Underuse of older 4-H members in program development; and Lack of sufficient data to show impact of projects and programs on 4-Hers. State Leaders and Program Specialists had similar perceptions of most problems identified. In general, north central respondents tended to rate the statements less harshly than others.

Information. For additional information, contact: Dr. Layle D. Lawrence, Agricultural Education, 2056 A.S., West Virginia University, Morgantown, WV 26506-6108, Telephone: (304)293-3431.

JONES, Lynn. "Career Education In 4-H Projects" Dissertation, Doctor of Philosophy, 1985, University of Wisconsin, Madison.

Purpose. The purpose of this study was to determine if a relationship exists between teaching styles of 4-H project leaders and their preferences for career education skills to integrate into 4-H project learning experiences.

Method. To collect the necessary data, a questionnaire was mailed to 240 randomly selected 4-H project leaders from six counties representative of the state of Wisconsin. The leaders were asked to rate, on a Likert type scale, 21 statements related to their style of teaching. They were also to indicate, on the same type of scale, their feelings about whether they should teach certain career skills as a part of their 4-H project. The data was analyzed with descriptive statistics, the gamma statistic, and the Chi-square goodness of fit.

Findings. 4-H project leaders felt that five particular career skills should be included in project teaching. These were: (1) good work habits, like being on time and listening to instructions; (2) the value of work, to self and society; (3) self understanding in relation to opportunities in the world of work; (4) skills related to the productive use of leisure time; and (5) ways to make work more enjoyable and meaningful. Four-H leaders did not feel they should teach as part of their regular project efforts subjects as: (1) career decision making skills, such as salary and educational expectations; (2) basic skills in math and communications; (3) economics, such as the application of the project to private enterprise; (4) sex equity in the world of work, like equal pay or sex role stereotyping; and (5) skills useful in finding and holding jobs, like filling out applications and interviewing.

Information. For additional information, contact: Lynn Jones, 4-H Program Specialist, 101-A Animal Husbandry, Oklahoma State University, Stillwater, Oklahoma 74078, Telephone: (405) 624-5392.

## WYOMING

ROHRBECK, Gene A. "Strengthening Leadership in Wyoming 4-H Community Clubs." Staff study, 1984, University of Wyoming, Laramie.

Purpose. The purpose of the study was three fold. First, to determine the present status of program planning and parent involvement in Wyoming's 4-H community clubs. Second, to assess the training needs of community club leaders. Third, to identify the training methods preferred by community club leaders in the state.

Method. The study was completed using the telephone survey method developed by Don A. Dillman at Washington State University. A random sample was drawn from the list of 548 4-H community clubs in Wyoming. Interviews were completed with 239 leaders in order to achieve a .05 level of significance. The interviews consisted of 21 questions. A committee of agents and volunteer 4-H leaders was used to develop the questions. Before the interviews began, the instrument was tested with a small group of leaders not included in the study itself.

Findings. Results show that only 123 of 239 clubs involved had planned club programs. Similarly, only 19 of 239 clubs used parent job agreements. Despite these facts, these two areas were among those leaders felt they needed the most help with. Among the leaders interviewed, 208 indicated the need for additional training.

Five areas of desired training ranked in order of need included: (1) Parent involvement, (2) Project leader orientation, (3) Planning club programs, (4) Delegating responsibilities and (5) Roles of 4-H junior leaders. Equally important was the way in which leaders wanted this training delivered. Training methods in the order of preference were: (1) County-wide meetings, (2) Community meetings, (3) Video-tape programs, (4) One to one counseling and (5) slide/tape sets. The really crucial factors related to methods was the desire to learn at home and avoid long distance travel to meetings. This involved both the saving of time and learning at the convenience of the 4-H leader.

Other factors included in the study were organizational leadership, impact of club's programs, composition of the planning committee and the type of parent involvement.

Information. For additional information, contact: Gene A. Rohrbeck, 4-H Program Coordinator, 100 West "B" Street, Casper, Wyoming, 82601, Telephone: (307) 235-9400.

WARDLAW, Mary Kay. "Perceptions of Benefits Derived by Individuals Participating in Wyoming 4-H Programs." Paper, Master of Science, 1985, University of Wyoming, Laramie.

Purpose. The purpose of this study was to determine benefits derived by individuals participating in Wyoming 4-H programs. Strengths and weaknesses of the current program can be determined. Information in this study can be used by professional Extension staff to implement new, and improve existing 4-H programs in Wyoming.

Method. A mail survey of 498 1982-83 Wyoming 4-H members was conducted. Participants were males and females, 15 through 18 years of age with at least 3 years of 4-H club work. The questionnaire consisted of 32 statements with a 5-point Likert scale and three open-ended questions. The Statistical Package for the Social Sciences "frequencies" program was used to analyze the data. The papers conclusions are based on mean, 95% confidence interval, relative percentages and adjusted percentages.

Findings. The sample revealed Wyoming 4-H offers positive consequences including knowledge gains, self attitude development, social attitude and behavior development, happiness, environmental awareness, and future opportunities exploration. Negative consequences reported were unfair competition, too much emphasis on winning, lack of challenge for older members, and interference with other activities.

Recommendations for improvement included challenging the older member, using competition to teach, improved promotion, improved information distribution, and increased health and environment programs. Individual counties are encouraged to conduct surveys of local needs and concerns.

Information. For additional information contact: Mary Kay Wardlaw, University Extension Agent, Big Horn County, Box 601, Basin, Wyoming 82410. Telephone: (307) 568-2278.

# HOME ECONOMICS

DOBBS, L. Gail. "The Effectiveness of the Parent Education Program of the Alabama Cooperative Extension Service in Reducing Incidence of Child Abuse and Neglect." Doctoral Dissertation, Ph.D., 1986, University of Alabama.

Purpose. This study was for the purpose of comparing the reincidence of abuse and neglect of families in the Parent Education Program (PEP) and a group receiving protective services only. In addition, characteristics of the families were correlated with group membership and outcome of treatment.

Method. PEP was a three year project conducted by the Alabama Cooperative Extension Service in cooperation with the Alabama Department of Pensions and Security (DPS). The program consisted of two components: (a) paraprofessionals were trained to work with the program families and (b) parenting classes were taught by the extension home economists. Families had been reported to DPS for abuse and neglect or family functioning problems. The protective services group was a sample of families in the same counties as PEP who received traditional intervention by the DPS social workers.

Demographic characteristics and abuse and neglect reports on 239 PEP and 275 protective services families were obtained from DPS files and 1981 to 1985. Additional information pertaining to PEP participation was collected from extension records. A chi square analysis compared the PEP and protective service families on repeated incidents of abuse and neglect. Interaction between group membership, outcome of treatment and demographic characteristics were tested by a MANOVA design. A Pearson r determined the correlation between months in the PEP program, number of classes attended, and abuse and neglect reports of that group.

Findings. No significant difference was determined between the incidence of abuse and neglect in the two groups. Interaction between the demographic characteristics, outcome of treatment, and group membership was not significant. The main effects were analyzed yielding a number of differences between the PEP and protective services groups. Only race, history of abuse and neglect were related to the outcome of treatment.

The results indicated that programs similar in scope to PEP could be utilized to supplement the protective services effort in this state and a similar degree of child protection could be expected. Future research should consider the cost effectiveness of such programs as an alternative to more costly intervention. The utilization of volunteers in the same capacity as the paraprofessionals should also be studied.

Information. For additional information, contact:
Gail Dobbs, Extension Home Economics, Duncan Hall, Auburn University, Alabama 36849, Telephone: (205) 826-4913.

EPSTEIN, Bernice A. "Instant Health Info: The Telephone Connection." Staff Study, 1984, University of Arizona, Tucson, Arizona.

Purpose. To determine how callers to a statewide toll-free telephone service of pre-recorded health and safety tapes used the information and if they met the program objectives of becoming better informed and more prepared to discuss problems with health professionals, practice preventive health and safety measures, recognize early warning signs of illness and be more self sufficient in home care of minor illnesses and accidents.

Method. A random selection of callers, people who had requested a free brochure and names from telephone directories were called by trained interviewers and asked to respond to a five minute interview. If the respondent was not familiar with the program, demographic information only was collected. Questions included ways of learning about the service, where brochures were obtained, why and how many times they had called, the degree to which the service met their needs and, most importantly, what they did with the information.

Findings. Key findings were that more users than non-users were under age 40 and had family income below $20,000/year. Ninety-eight percent of those that used the system rated the information as very or moderately helpful. More than half of the users reported doing "something differently" after hearing tapes. Of these 53% took some preventive action. Only small differences existed between users and non-users in reporting accessibility to health providers and hospitals. The findings suggest that residents will use their telephones to access health and safety information and that many of them will report they followed the suggestions made on the tapes.

Information. For additional information, contact: Bernice A. Epstein, Extension Specialist, Health and Safety, Family and Consumer Resources, University of Arizona, Tucson, Arizona 85721, Telephone: (602) 621-3346.

## ARIZONA

EPSTEIN, Bernice A. "Serving the Rural Community: What Types of Promotion Work?" Staff study, 1985, University of Arizona, Tucson, Arizona

Purpose. To increase usage of a statewide toll-free health information service beyond what was available with free publicity by trying different types of paid promotion and measuring the net effect of each effort.

Method. Seven different types of promotion were made one or more times over 18 months, in one county at a time and only in rural parts of Arizona. Efforts were spaced at a minimum of two week intervals except over the holiday season. The base against which the efforts were measured derived from an average use for each county for two four-week periods each year when no promotion was done. To this average was added a margin for chance. Calls above this number were counted as the net response.

Findings. The most effective ways to increase calls to the service were to get a brochure/directory into the home. Of the four ways this was tried, distribution to students at school was most effective. Least effective were newspaper ads instructing readers to call for a free directory. Using advertising supplements either for reprinting or inserting the brochure averaged 25% more calls than the same methods in regular newspapers. Brochure inserts in newspapers delivered on Tuesdays brought a greater response than on any other day. Cost of all promotions ranged from zero to 9.6 cents per unit delivered. Cost per new call ranged from zero to $4.56 with an average of $1.04. Free publicity is not the best way to generate a response.

Information. For additional information contact: Bernice A. Epstein, Extension Specialist, Health and Safety, Family and Consumer Resources, University of Arizona, Tucson, Arizona 85721 Telephone (602) 621-3346.

WHEELER, Janet P. "A Comparative Study of Two Curricula Designs in the Georgia Expanded Food and Nutrition Education Program." Thesis, Master of Agricultural Extension, 1985, University of Georgia, Athens.

Purpose. The purpose was to study the effectiveness of two curricula designs, a determinate method and an indeterminate method, used in the Georgia Expanded Food and Nutrition Education Program. Specific objectives were to determine the level of achievement of program participants using each curriculum and compare the levels of achievement attained with the two methods.

Method. The determinant curriculum involved the use of a set curriculum with limits on the amount of time of enrollment for the homemaker. The indeterminant method involved teaching participants on the basis of need as perceived by program paraprofessional aides and then graduating participants on the basis of achievement with no set time limit. A sample of 68 homemakers was selected from the indeterminate program, and a sample of 201 homemakers was selected from the determinant program. Paraprofessional aides collected data through inteviews. Analysis was done for relationships between variables by using Pearson Product Moment Correlation Coefficients. Statistical significance was determined by using the t-test.

Findings. The data shows that both the indeterminant program and the determinant program resulted in significant improvements in nutrition, food knowledge, and consumption practices by EFNEP homemakers. The determinant program significantly decreased the average enrollment times of the homemakers. Significant moderate positive relationships were found to exist between Food Recall scores and time in the program and number of lessons received with the use of the indeterminant program.

Information. For additional information, contact: Dr. F. Richard Rohs, Department of Extension Education, University of Georgia, Athens, Georgia 30602. Telephone: (404) 542-3151.

# HAWAII

BOLES, William. "An Evaluation of a Low Cost/No Cost Residential Self-Help Energy Conservation Program." Staff Study Funded by Hawaii Institute of Tropical Agriculture and Human Resources, 1985.

*Purpose*. The purpose of the research was to aid in the development of a self-help energy conservation audit/retrofit program based upon low cost and no cost (LC and NC) techniques. The data were used in the *a priori* evaluation of an Extension Program in order to provide a greater degree of program success. The cor servation techniques were selected with several unique factors o Hawaii in mind: 1) tropical climate (no heating degree days), 2) high energy costs (>$.12/KWHr), 3) high proportion of renters (>55% of the households statewide , and 4) water heating accounts for 40 percent of the typical monthly residential energy bill. The research, therefore, tested the efficacy of the audit/retrofit program and provided empirical data upon which to base Extension programs including the preparation of program materials.

*Method*. A field study was conducted using 36 households residing in either a high rise condominium (n=19) or farm worker housing (n=17). Selection criteria required that households be volunteers which consumed over 100 KWHrs of electricity per week and maintained household stability during the data collection period. Two weeks of pre-treatment and two weeks of post-treatment KWHr consumption data were collected (condo, 7/85-8/85; farm, 10/85-11/85). The treatment group received an energy audit and appropriate LC and NC retrofits including: 1) water heater thermostat set-back to 120°F (NC), 2) water heater blanket and insulating pipe wrap (LC), 3) shower and sink flow restrictors (LC), and 4) an educational message discussing behaviors which promote the conservation of hot water (NC). The per unit kit was less than $40 and took less than one hour to install.

*Results*. Collectively, treatment households saved over 1540 KWHrs of electricity in the two weeks following retrofit ($\bar{x}$ = 102.8, S.D. = 61.33 per household per two weeks) while the control group household *increased* their consumption by 150 KWHrs ($\bar{x}$ = 8.82, S.D. = 22.2 per household per two weeks) during the matched time intervals. An analysis of variance on pre-test/post-test differences for treatment and control groups yielded significant results (df = 1, F = 73.35, p <.001). Considering Hawaii's cost of electricity these energy savings translate into nearly $25 per month per household. The self-help program demonstrates a payback potential of less than two months and translates into an annuity the value of which after 12 months at 12 perdent interest on a $40 investment if $317.08. The research validates, for the State of Hawaii, findings which exist for other regions.

*Information*. Contact: Dr. William Boles, Miller Hall #10, The University of Hawaii, Honolulu, HI 96822, Telephone: (808) 948-6519.

# HAWAII

DES JARLAIS, Mary Ellen. "A Demographic Profile and Selected Energy Conservation Practices of the University of Hawaii's Extension Homemakers' Clientele." Research publication, 1985, University of Hawaii, Honolulu.

*Purpose*. The purpose was to develop a demographic profile of Hawaii's Extension Homemakers' Clientele. It included: county of residence (rural or urban); individual characteristics (age, sex, educational level, full-time or part-time occupation); family characteristics (number of individuals, income, ethnic heritage; dwelling characteristics (type of ownership, type of dwelling, age, and number of rooms). Questions concerning the responsiveness to home energy conservation measures were included.

*Method*. A questionnaire was mailed to a random sample of 500 members drawn from the 1,290 membership of Spring 1981. Relative and absolute frequencies, median and mean were computed. Cross tabulations established relationships at the 5 percent and 1 percent levels of confidence to determine the most significant findings.

*Findings*. The typical respondent was female, 77% lived in a rural area (less than 2500). She was middle aged; most were in the 45 to 54 age group. The mean was 45.2 years; the median was 50.4 years. She valued education; over 66 percent had more than a high school education. She subscribed to the work ethic; 61 percent were employed outside the home; 39 percent worked full-time; 22.7 percent worked part-time. Her predominant employment was in a clerical position; 5.2 percent had achieved managerial status. There were 4.4 persons in her family. The average income was $18,140. Americans of Japanese heritage constituted 51.3%

A single-family detached home with land ownership was owned by 70 percent; the house was built 15 to 19 years ago; the mean and median number of rooms was eight (counting half baths, *lanai* and basements).

Receptivity to specific energy measures was: 7.9% arranged for an energy audit; 24.8% planted trees and shrubs. Three profile characteristics were strong incentives for adoption of energy conservation practices. 1)Fee simple ownership of land and home. 2)The higher the income, the greater the adoption of energy-related changes. 3)The single-family dwelling is most apt to have sufficient roof and yard space for today's solar technology and for shade trees and shrubs.

*Information*. For additional information, contact: Mary Ellen Des Jarlais, Prof. Human Resources, 2515 Campus Road, University of Hawaii, Honolulu, Hawaii 96822, Phone:(808)948-8105

## HAWAII/NEW YORK

RAUCH, Marian D. "Factors in the Life Patterns of Paraprofessionals: EFNEP Aides in New York State." Dissertation, Ph.D., 1985, Cornell University, Ithaca, N.Y.

Purpose. To explore the perceived impact of the EFNEP experience on the lives of paraprofessionals first employed by Cornell Cooperative Extension during 1971-73. Results to be used as basis for management recommendations to provide improved on-the-job experiences for paraprofessionals and thus better service to the clientele.

Method. Data regarding perceived supports and opportunities available and utilized by paraprofessionals across the life span were gathered via a mailed questionnaire. The 179 responses to the questionnaire represented 68 percent of those receiving it. Other data included purposive interviews and a review of documents. Data were analyzed using descriptive, correlational, and qualitative methods.

Findings. Since first employed by EFNEP, 30 percent of the EFNEP paraprofessional respondents had completed one or more educational experiences (triple the national adult education rate). Seventeen percent were still EFNEP employees; of the 47 percent employed outside EFNEP: 29 percent were in aide or skilled vocational positions and 16 percent in managerial or professional capacities. Almost 33 percent were in some form of business, sales or office work, primarily due to pay and availability of jobs, although job satisfication was often less. Respondents reported gaining in self-confidence while with EFNEP and finding their greatest job satisfication in helping others and seeing them grow. They reported gaining a great deal of food and nutrition knowledge and making many specific behavioral changes. They also reported improved ability to manage their own families' health and finances and increased awareness of social problems and community resources.

Correlational analysis revealed continuities across the life span, compensation when supports were lacking, and the tendency for personal growth when basic support needs were met and/or family responsiblities presented challenges. There was a moderate correlation between more positive pre-EFNEP experiences, longer tenure with EFNEP, and more perceived growth from the EFNEP experience. Qualitative data revealed concerns regarding breadth and depth of in-service education, assimilation into Cooperative Extension as a whole, directives to focus only on food and nutrition when working with multi-families, and increasing emphasis on numbers and accountability.

Information. Contact: Dr. Marian D. Rauch, EFNEP State Coordinator, University of Hawaii Cooperative Extension, Hawaii Institite of Tropical Agriculture and Human Resources, 3050 Maile Way, Honolulu, Hawaii 96822, Phone: (808) 948-8161.

SCHOLL, Jan F. "Origins of Extension Home Economics Programs." Dissertation, Doctor of Philosophy, 1986, Iowa State University, Ames.

Purpose. In order to gain a better understanding of needs assessment as a part of the program planning process and a better idea of how planners conduct needs assessments for their major programs, the purpose of this study was to identify origins of extension home economics programs in the Midwest and to examine to what extent these programs represent a model outlined by Phillip Nowlen (1980). Secondary objectives were to compare the program origins by demographic, educational, and job related characteristics of the home economists.

Method. A questionnaire was mailed to a random sample of fifty percent of the home economists in the seven states of: Illinois, Iowa, Minnesota, Nebraska, South Dakota, and Wisconsin. This provided a respondent sample of 241 home economists.

Home economists were asked to list three of their major programs for the 1985-1986 program year and to choose from a list of 32 possible origins, those that corresponded to their programs. Chi squares were run to test the relationship of the nonparametric variables and a multiple response procedure (SPSSX) was used to sort responses and facilitate comparisons.

Findings. Preliminary findings indicate that while advisory committee input may be the number one origin of the extension home economics programs studied, home economists were found to have used a wide variety of techniques to obtain ideas for programs. Significant differences in program origins were found with respect to programs representing the various program areas of home economics, including: human development and the family, food and nutrition, clothing and textiles, housing and interior design and equipment, and consumer education and home management. Contrary to the findings of many previous studies, no significant differences were noted among home economists working a short period of time and veteran extension home economists in either the number of origins or the type of origins listed.

Information. For additional information, contact: Jan Scholl, 4-H Specialist, Home Economics, University of Wyoming, P.O. Box 3354, Laramie, WY 82071. Telephone (307) 766-5663.

## LOUISIANA

GENTRY, Peggy C. "The Elementary Level Food and Fitness Curriculum of the Louisiana Cooperative Extension Service: Program Effectiveness and Management." Doctor of Education Dissertation, 1985, Louisiana State University, Baton Rouge.

Purpose. The study was conducted to evaluate the effectiveness of a food and fitness program implemented by home economists of the Cooperative Extension Service. The Fitness Factor program was taught by 49 classroom teachers to 1,248 fifth grade students in 20 schools in 9 Louisiana parishes. A secondary purpose was to identify and study program management factors that affect success of the program.

Method. Three sources of data collection were a) a youth pretest/posttest instrument measuring food and fitness practices and attitudes, and food consumption, b) a classroom teacher questionnaire, and c) a home economist questionnaire. Ten hypotheses were tested. The following statistical tests were used to analyze the data: t-test, analysis of variance, the Scheffe' procedure and multiple regression.

Findings. The program effort affected positive changes between pretest and posttest in youth's food and fitness practices and attitudes, but not food consumption. There were statistically significant differences among parish groups of youth participants in the study, indicating that some students benefited more from the program than others. Further studies are indicated to elucidate reasons for differences in group response. Thirteen moderator or predictor variables were identified and studied for possible effect on student outcome. Significant predictors of student practice change were teacher training methods and confidence level of teachers. Significant predictors of student attitude change were a high level of parental involvement and confidence level of teachers.

The Fitness Factor program can be successfully implemented in a school setting with the expectation that student behavior will change.

Information. For additional information, contact: Peggy C. Gentry, Assistant Specialist (Nutrition), Louisiana Cooperative Extension Service, Knapp Hall, University Station, Baton Rouge, Louisiana 70803, Telephone: (504) 388-6902.

HUMBLES, Barbara A. "Associations Between Previous Treatments for Alcohol Addictions and Chances for Success at O'Brien Halfway House, Inc., Baton Rouge, Louisiana." Dissertation, Doctor of Education, 1985, Louisiana State University, Baton Rouge.

Purpose. The major focus was the association between previous treatments for alcohol addiction and chances for success in a halfway house.

Method. A case study of the O'Brien Halfway House during fiscal year 1983-84 was conducted.

Data were gathered on 84 patients through the use of a patient summary questionnaire. In a follow-up study involving 26 (one-third) of the 84 patients, the drinking behavior and lifestyles of these patients one year later were examined using a Personal Interview Schedule and the Alcoholism Responsibility Scale.

Three different statistical tests were used to support the analysis: the chi square test, the analysis of variance, and the Pearson's Product Moment Correlation. The .05 level of probability was used to determine statistical significance in testing the various hypotheses.

Findings. Concerning the major variables in the study, a statistically significant association was found between fewer previous admissions for alcohol addiction and success in subsequent admissions.

Statistically significant differences were found between successful completion of the program at the O'Brien Halfway House and a) living alone prior to enrollment and, b) staying longer in treatment.

Statistically significant differences were also found between fewer previous admissions for alcohol addiction treatment and a) being male, b) presently married, c) support from the spouse and others while in treatment, d) living in a city other than Baton Rouge, e) completing high school, f) being employed at discharge, and g) being younger when alcohol use was started.

In the follow-up study statistically significant differences were found between fewer previous treatments for alcohol addiction and more personal control.

Information. For additional information, contact: Barbara A. Humbles, 11908 Kingston Drive, Baton Rouge, Louisiana 70807, Telephone: (504) 775-2857.

## LOUISIANA

ROBERTS, Gerald P. "A Study of the Home Gardening Habits of Limited Resource Families Enrolled in the Expanded Foods and Nutrition Education Program in Evangeline Parish, Louisiana, 1983." Master of Science Thesis, 1985, Louisiana State University, Baton Rouge.

Purpose. The study sought to compare urban and rural gardeners concerning various aspects of gardening in order to better understand their needs and to plan more productive educational programs.

Methods. Data for this study were obtained by personal interviews with a random sample of home gardeners who were enrolled in the Expanded Foods and Nutrition Education Program (EFNEP). A prepared interview schedule was used.

Findings. Concerning some characteristics of the gardeners and some aspects of their gardens, it was found that the average age was 53 years, the average years of education was 6.5 years, the average income was $587 per month, the average number of years growing a garden was 14.1, the average size of the gardens was 830 square feet, 72 percent had not had their soil tested, and 81 percent reported saving of food cost as the most important reason for gardening.

Significant differences were found between urban and rural gardeners at the .05 level of probability as follows.

Urban gardeners compared to rural gardeners were more likely to be older, more likely to have a lower average income, more likely to report health and exercise as the way their garden was most helpful, less likely to report nutrition in family's diet as the way their garden was most helpful, and less likely to use fertilizer in their gardens.

It was concluded that home gardens have been an asset to families in Evangeline Parish, not only for the economic and nutritional gains, but as an important source of exercise and recreation. It is also obvious that the EFNEP program has done much to expand and improve home gardens in the parish.

Information. For additional information, contact: Gerald P. Roberts, Associate County Agent (1890), Evangeline Parish, Louisiana Cooperative Extension Service, 230 Court Street, Ville Platte, Louisiana 70586-4493, Telephone 318/363-5646.

FETTERMAN, Elsie. "Economic Consequences of Household-Produced Goods and Services." Staff Study, March 1984, University of Massachusetts, Amherst.

Purpose. The purpose of the study was to set a dollar value on household-produced goods and services; to determine what families produce for themselves (and/or others): to measure the economic worth, or real dollars earned, of household-produced goods and services; and to measure the economic worth of the exchange or bartering of household-produced goods and services.

Method. Weekly time estimates were requested from a large number of people (Group 1, N = 940) and then checked the accuracy of those estimates vis-a-vis a volunteer group which, in addition to making estimates, filled in a daily log (Group 2, N = 295) of their activities. Other studies limited the number of allowable household work categories. In addition, those studies only focused on duties/jobs performed for the family and did not include those performed for barter or pay. Twelve broad categories of activities were included and then allowed for a "miscellaneous" category (caring for pets, automobile, etc.). Respondents in Group 1 were asked for estimates of time spent for family, barter, and pay in these activities. To the best of our knowledge, there is no study measuring the economic worth of household-produced goods and services for pay and for barter.

Findings. The number of Massachusetts Extension clientele participating was 1,235. The first group of 940 completed estimates for time spent on household-produced goods and services in a week. Group TWO (295) provided both an estimate and weekly diary. In keeping the diary however, respondents were not asked to differentiate in each category between what was done for the family, for barter, and for pay.

Taking the lowest hourly figures for the twelve categories of household-produced goods and services and applying it to the 24,000 clients on the Massachusetts Extension Home Economics mailing list, the total worth of what is done for family, barter, and for pay totaled $546,622,252. The value of household-produced goods and services for pay totaled $38,812,800 and the total worth for what is bartered is $6,564,480. The average per family is $22,776 per year.

Information. For additional information, contact: Elsie Fetterman, Assistant Director of Extension for Home Economics, 214 Stockbridge Hall, University of Massachusetts, Amherst, Massachusetts 01003, Telephone: (413) 545-2197.

SCHUMACHER, Warren F. "The Effectiveness of Mutual Support Groups for Families with a Disabled Member." Hatch Project, 1986, University of Massachusetts, Amherst, Massachusetts.

Purpose. To determine the impact of applying a systems analysis approach to assist families in leading a disabled member to independent living status where possible. Within a support group dynamic, parents were encouraged to take more control over their own lives following the classical Cooperative Extension model of "helping people help themselves."

Method. Over a twelve month period, ten families met every other week in a support group format, participated in three family weekends, became involved in a recreational program for their disabled children. Pre and post tests were administered using the Nowicki-Strickland Locus of Control and the Tennessee Self Concept instruments. Quantitative and qualitative data were correlated and analyzed to measure the effectiveness of the helping strategies.

Findings. A significant number of participants in this "Family Enhancement Project" gained more control over their own lives and improved their sense of self esteem. Many factors contributed to dramatic change in attitude and behavior of several participants. The most significant variables were the care and nurturance of the group, the sharing of mutual concerns and problems, the encouragement of the total family to interact as a system in informal recreational environments, the empowerment realized when "impossible" situations were dealt with effectively. Many mothers and fathers experienced the freedom of "letting go" and encouraged their child to also take more control over his or her own life.

Information. For additional information, contact: Warren Schumacher, Extension Specialist, Human Development, 113 Skinner Hall, University of Massachusetts, Amherst, Massachusetts 01003, Telephone: (413) 545-2313.

BOND, Linda. "Families of the Chronically Ill or Handicapped: Do Siblings Differ in Self-Esteem?" Michigan State University, East Lansing. September, 1984.

Purpose. This study examined the question that differences exist in self-esteem between early adolescents with chronically ill or handicapped siblings and those with nonaffected siblings.

Method. The Michigan Early Adolescent Survey studied 304 youth, ages 10-14, and their parents and provided the data to answer the research question. The subjects were drawn from a nonclinical population, public and parochial schools, using a stratified multistage cluster sampling technique. Subjects and their parents were interviewed, separately, within their own homes by trained interviewers.

Findings. The School Short Form of the Self-Esteem Inventory (Coopersmith, 1967) was used to measure self-esteem. Self-esteem scores were higher in the group of subjects without chronically ill or handicapped respondents or siblings. When controlling for sex and grade level, differences between the two family groups were not significantly related to the sex of youth respondent, but scores were positively correlated with grade level.

Information. For additional information, contact: Leah Hoopfer, Program Leader, Michigan 4-H Youth Programs, 6 Berkey Hall, Michigan State University, East Lansing, Michigan 48824, Telephone: (517) 355-0180.

BOND, Linda Diane Lee. "Families with Chronically Ill and Handicapped Children and Nonaffected Children: Self-Esteem, Stressful Life Events, Family Role Expectations and Family Relationships." Ph.D. thesis, 1985, Michigan State University, East Lansing.

Purpose. Data are available to suggest that the proportion of children with some limitation in their activities has dramatically increased over the past few years. The presence of a disabled child in a family is a potential stressor, causing families to adapt if they are to meet the needs of all family members. The degree of adaptation called for depends upon the type and severity of the condition and is not the same for all families. This study sought to examine self-esteem, stressful life events, family role expectations and family relationships in families with chronically ill and handicapped children and nonaffected children.

Method. Data for this study were drawn from a larger study, the Michigan Early Adolescent Survey. One hundred and ninety-seven families of the original 304 families met the criteria for inclusion in this study. The central focus of this study was the family and necessitated data from fathers, mothers and adolescents. Families were divided by the presence of a chronically ill or handicapped child. Statistical analysis included t tests and repeated measures analysis of variance.

Findings. Five major hypotheses were tested in this study. Self-esteem was lower among the members in handicapped families. The most significant differences were among adolescents. Low numbers of stressful life events were reported for both groups of families. The majority of family members were traditional in their family role expectations. The presence of a handicapped child did not significantly influence these role attitudes. Family relationships were positive in all the study families with no significant differences between the two groups. The findings of this study suggest that on the variables measured, families with chronically ill and handicapped children are very similar to families with nonaffected children except in self-esteem.

Information. For additional information, contact: Leah Hoopfer, Program Leader, Michigan 4-H Youth Programs, 6 Berkey Hall, Michigan State University, East Lansing, Michigan 48823, Telephone: (517) 355-0180.

## MICHIGAN

CONVERT, Anita Miller. "Parental Expectations for Early Adolescence: Cultural vs. Interpersonal." October, 1983, Michigan State University, East Lansing.

Purpose. The adolescent years are viewed as turbulent years filled with conflict between parents and teens. The expectations that parents have for their adolescent affect this conflict. This paper explores those parental expectations, first examining the macrosystem (cultural) attitudes and the microsystem (interpersonal) attitudes; then the relationship between these attitudes is explored.

Method. Data were the results of a state-wide survey of 304 early adolescents and their parents conducted in 1983. Youths were interviewed in their homes and parents responded to a questionnaire. Subjects were selected using a stratified multi-stage cluster sampling technique.

Findings. Parental attitudes about adolescents were slightly positive which indicated that marginally fewer parents of adolescents believed the negative stereotype about adolescence. In other words, a slight majority of parents did not believe that teens were rebellious, lazy, etc. But there were still a great number of parents who did believe in the stereotype.

More parents who held negative stereotypic attitudes about adolescents held these same negative attitudes about their own child. The negative cultural attitudes did appear to influence the parents' attitudes about their own children.

Information. For additional information, contact: Leah Hoopfer, Program Leader, Michigan 4-H Youth Programs, 6 Berkey Hall, Michigan State University, East Lansing, Michigan 48824, Telephone: (517) 355-0180.

## MICHIGAN

KEITH, Joanne. "Early Adolescents and Their Families: Determinants of Family Well-Being", Michigan State University, East Lansing. June, 1985.

Purpose. Early adolescents (10 to 14 year olds) are at a very significant transition stage; with social problems developing at earlier and earlier ages, this developmental stage has increasingly become of interest to researchers, practitioners and parents. To understand ways to improve family life and community education of early adolescent youth, families with early adolescents reporting that family life was satisfactory and enjoyable are compared with families who report difficulty in family life at this stage. Three specific areas of inquiry are considered: (1) early adolescent developmental needs; (2) parent-child relationships and family activities; (3) non-formal educational needs of families and youth.

Method. Data were the results of a state-wide survey of 304 early adolescents and their parents conducted in 1983. Youths were interviewed in their homes and parents responded to a questionnaire. Subjects were selected using a stratified multi-stage cluster sampling technique.

Findings. Some of the findings were:
Family Well-Being:
Nineteen percent of the parents reported that the past year had been a good one for their family; 60 percent reported that it was mostly good with few bad times and 18 percent reported a difficult time.
Parent-Child Relationship:
--Ninety-six percent of the parents said they enjoy parenting their early adolescent, although over 50 percent of the fathers and almost 40 percent of the mothers felt that they do not spend enough time with their child. Most parents reported they enjoyed being a parent to this child more now than when the child was younger.
--Nearly all early adolescents reported feeling close to their parents: 63 percent reported that they are very close to their mothers, 45 percent reported being very close to their fathers.
Family Activities:
--Eating at least one meal together and watching television were the most frequently reported family activities. No other family activities surveyed were reported as being participated in regularly by more than half the families.
Family and Community Non-formal Education.
--Skills which more than half the parents reported their youth could not learn well enough in the family included technical and mechanical skills, communication and leadership skills.
--One out of 3 or 4 parents reported needing help outside the family for teaching interpersonal skills, self-management and self-esteem.

Information. For additional information, contact: Joanne Keith, Department of Family & Child Ecology, Michigan State University, East Lansing, Michigan 48824, Telephone: (517) 353-7860.

## MICHIGAN

KEITH, Joanne. "Early Adolescents: Developing Technical and Interpersonal Skills in the Family and Community." Michigan State University, East Lansing. August, 1984.

Purpose. What interests, abilities and career expectations do early adolescents express that are thought to be related to the development and use of high technology and competent interpersonal skills? Do the interests, abilities and career expectations of the youth differ by sex and age of the youth, by income level of the family or by education level of parents?

What expectations do parents express for their children, related to skills and gender-related roles for the future? Do expectations differ by sex and age of the child, income level of family or educational level of parents? What activities are families involved in that teach skills in technological use and/or interpersonal relations?

Method. Data were the results of a 1983 state-wide survey of 304 early adolescents and their parents. Youths were interviewed in their homes and parents responded to a questionnaire. Subjects were selected using a stratified multi-stage cluster sampling.

Findings: Youth in the sample were 10- to 14-years of age and expressed interest in their career development.
—In terms of career interests, 41 percent of the boys were significantly more interested in careers with a technical orientation; about 50 percent of the girls were significantly more interested in careers requiring more interpersonal skills.
—Boys were somewhat more likely to consider careers with higher interpersonal skills than girls were to consider careers with technical/mechanical orientation.
—In both the technical and interpersonal dimensions, 22 percent of the youth demonstrated high interest; this represented 26 percent of the total number of boys and 17 percent of the total number of girls. Higher education of a boy's father increased the youth's likelihood of being high in both dimensions.
—Approximately 40 percent of the parents reported frequent discussions with their children about future jobs/careers, and 34 percent of the fathers and 25 percent of the mothers reported they did not discuss jobs or careers with their child during the past year.
—Parents identified preparation of youth in technological and interpersonal skills as very important for both sexes and as the most significant areas where families would like educational support, but the discussions in the family about future jobs or careers was more frequent with sons than with daughters.

Information. Contact: Joanne Keith, Associate Professor, Department of Family and Child Ecology, 203 Human Ecology, Michigan State University, East Lansing, Michigan 48824, Telephone: (517) 353-7860.

NELSON, Christine. "Examining New Families' Concerns About Their Early Adolescents: Implications for Parent Education Programming." October, 1984, Michigan State University, East Lansing.

Purpose. "New" families may be single parent mothers and their children, single parent fathers and their children, "blended" families created from remarriage, or dual earner families in which both parents are employed. In order to assess whether "new" families had differing parent education needs which could be addressed by those who work with them, a series of questions from the Michigan Early Adolescent Survey was analyzed by family type.

Method. Data were the results of a state-wide survey of 304 early adolescents and their parents conducted in 1983. Youths were interviewed in their homes and parents responded to a questionnaire. Subjects were selected using a stratified multi-stage cluster sampling technique.

Findings. All four family types indicated a need for five skills: mechanics, computers, working with the elderly, leadership, and communication. Although each family type might indicate these in a different priority order, at least fifty percent of the parents in each family type reported that these topics were ones for which they needed help. In addition, single mothers reported needing help with teaching home repairs and self-confidence. Blended families reported the largest number of skills with which they would like help. In addition to the common five, they reported a need for help with getting along, learning about other cultures, decision-making, self-confidence, caring for kids, raising foods, managing time, and use of leisure. Dual earner families said that help was needed in the areas of learning about other cultures, caring for children, self-confidence, getting along, and managing time. Traditional families had one need other than the common five: learning about other cultures.

Statistical differences occurred between family types on seven of the twenty skill areas to which parents responded. The areas were home repairs, decision making, caring for children, raising food, knowledge about sexuality, self-confidence, and mechanics.

Information. For additional information, contact: Christine Nelson, Assistant Professor, Department of Family & Child Ecology, 203 Human Ecology, Michigan State University, East Lansing, Michigan 48824, Telephone: (517) 353-7860.

NELSON, Christine S. "Effects of Parental Employment Types on Attitudes Toward Parental Employment." October, 1983, Michigan State University, East Lansing.

Purpose. This study attempted to address concerns of those interested in maternal and paternal employment and their relationship to early adolescent attitudes toward parental work by examining parental employment. The research questions were:
(1) Do different parental employment types have different effects on early adolescent attitudes toward parental work?
(2) What is the role of gender in this practice?

Method. Data were the results of a state-wide survey of 304 early adolescents and their parents conducted in 1983. Youths were interviewed in their homes and parents responded to a questionnaire. Subjects were selected using a stratified multi-stage cluster sampling technique.

Findings. Early adolescents of employed women are less traditional in their attitudes toward parental employment than are youths of non-employed mothers regardless of their family employment type. Family types were defined as single parent, working mother; dual earner; and traditional. Sons in traditional parental employment type families were the exception. They were more traditional than their peers.

Information. For additional information, contact: Christine Nelson, Assistant Professor, Department of Family & Child Ecology, 203 Human Ecology, Michigan State University, East Lansing, Michigan 48824, Telephone: (517) 353-7860.

NELSON, Christine Seipke. "Toward an Ecology of Early Adolescent Sex Role Development: Attitudes and Behaviors." Ph.D. thesis, 1985, Michigan State University, East Lansing.

Purpose. This study examined the development of male and female early adolescent sex role attitudes and behaviors in an ecological context as defined by Urie Bronfenbrenner (1979). Based upon the concepts, hypotheses, and propositions described by Bronfenbrenner, selected exosystem, microsystem, and human variables and their relationship to early adolescent sex role attitudes and behaviors were examined. The exosystem variables were maternal employment, duration of maternal employment, and father's attitude toward mother's employment. The microsystem variables were interactions between the parents' sex role attitudes and the amount of time the parent spent with the child and the parents' sex role attitudes and the level of closeness that the child reported feeling for the parent. The human variables were chronological age and parental perceptions of the early adolescents' pubertal age.

Method. Data were the results of a state-wide survey of 304 early adolescents and their parents conducted in 1983. Youths were interviewed in their homes and parents responded to a questionnaire. Subjects were selected using a stratified multi-stage cluster sampling technique.

Findings. Hierarchical multiple regression was used to test both early adolescent sex role attitude development and behavior development models for females and males. Two significant models were found. These were for male and female early adolescent sex role attitude development. The models included no common significant variables. The level of traditionalism of female early adolescent sex role attitude development was significantly influenced by maternal employment, the level of traditionalism of the father's sex role attitudes in interaction with the amount of time he spent with his daughter, and chronological age. The level of traditionalism of male early adolescent sex role attitude development was significantly influenced by the level of traditionalism of the mother's sex role attitudes in interaction with the level of closeness that the son reported feeling about the mother, and the mother's and father's perceptions of their son's pubertal age. The exosystem variables accounted for the most variance in the female model; the human system variables accounted for the most variance in the male model.

Information. For additional information, contact: Christine Nelson, Assistant Professor, Department of Family & Child Ecology, 203 Human Ecology, Michigan State University, East Lansing, Michigan 48824, Telephone: (517) 353-7860.

PHILLIPS, Cynthia K. "Factors Related to the Process of Political Socialization of Home Economists in Missouri." Dissertation, Doctor of Philosophy, 1984, University of Missouri-Columbia.

Purpose. The purpose of the study was to examine the relationship of selected demographic variables of Missouri home economists and factors of the political socialization process. The following research question was investigated: Considered individually and in combinations, to what extent do the following variables relate to the political socialization process of home economists in Missouri: age, years of total professional experience in teaching and/or industry, population of place of residence, highest degree earned, participation in public policy workshop, and number of memberships in professional organizations?

Method. The population used in the study consisted of Missouri home economists. Data utilized in this study were collected by a survey that was mailed to the participants. The data were submitted for computer analysis and met certain standards for accuracy and completeness. Data from 274 surveys were analyzed.

The study utilized factor analysis to identify three dependent variables used for statistical analysis: the influence of home economics and other professional organizations, colleagues, and personal political experiences. The multivariate and univariate one-way analysis of variance tests were used to ascertain if there were significant differences between the average Political Socialization Survey score and among the independent variables listed above. The Pearson product-moment correlation was calculated for each of the dependent variables, and the use of stepwise multiple regression with an alpha level of .05 was used to examine the best models for a higher political socialization score on all three dependent variables.

Findings. The variables of age, years of total professional experience, population of place of residence, highest degree earned, participation in the workshop, and the number of memberships in professional organizations are related to the political socialization of home economists in Missouri. It was also concluded that those persons that participated in the public policy workshop, held an advanced degree, and had a greater number of memberships in professional organizations were more likely to have higher scores on factors relating to political socialization.

Information. For additional information, contact: Education Academic Affairs, University of Missouri-Columbia, 109 Hill Hall, Columbia, Missouri 65211, Telephone: (314) 882-8311.

PARROTT, Kathleen R. "Critical Factors Affecting Consumer Satisfaction with the Home Remodeling Process." Thesis, Doctor of Philosophy, 1985, University of Nebraska-Lincoln.

Purpose. A study of households that had remodeled their homes was undertaken to determine factors affecting satisfaction with the remodeling process. The factors investigated included characteristics of the household, housing characteristics and the remodeling process. Overall satisfaction with housing, change in satisfaction with the dwelling as a result of remodeling and satisfaction with the remodeling process were studied.

Method. A sample of 250 households in the Lincoln-Lancaster Standard Metropolitan Statistical Area, who applied for a building permit to enlarge or alter their owner-occupied, single family home during 1984, were contacted by a mail survey during 1985.

Findings. Highly satisfied households were significantly different than not highly satisfied households. Households highly satisfied with their housing were characterized as: older; higher value homes; longer residence; homes more than acceptable; and less "do-it-yourself" remodeling projects.

Family life cycle stage, length of marriage and socioeconomic status were characteristics of the household having the greatest effect on the remodeling process variables of extent of "do-it-yourself", planning the project, and use of space. Value of the house, length of residence, age of the structure and equity were housing characteristics having the greatest effect on the remodeling process variables of planning the project, purpose and goal of remodeling, and use of space.

Major findings included: a) "do-it-yourself" activities were negatively associated with satisfaction; b) greatest increase in satisfaction after the housing adjustment of remodeling was associated with housing satisfaction before remodeling; c) planning the remodeling project and consulting with experts was positively associated with satisfaction; d) a strong consumption value orientation was positively associated with satisfaction; and e) resources invested in remodeling was positively associated with satisfaction.

Information. For additional information, contact: Kathleen Parrott, Extension Specialist, 205 Home Economics Building, University of Nebraska-Lincoln 68583-0802, Telephone: (402) 472-2914.

## NEBRASKA

THOMPSON, Thelma. "The Effectiveness of the Leader Training Lesson, 'Take the Stain and Pain Out of Laundry'." Staff Study, 1984, University of Nebraska-Lincoln.

Purpose. The purpose of the study was to identify the impact and consequences of the Home Economics leader training less, "Take the Stain and Pain Out of Laundry."

Method. Out of 85 county Extension offices in Nebraska, 20% were randomly selected as data collection sites and members of 20% of the Extension clubs in each of these counties were randomly selected to receive a mail questionnaire. Out of the 959 questionnaires mailed, 53% were returned but only 37% were completed. Analysis included frequency distribution and a paired t-test to compare level of statisfaction with laundry results.

Findings. As a result of the lesson, 80% of the respondents changed one or two laundry practices. Those mentioned most frequently were (a) reading laundry soap/detergent labels, (b) pretreating heavily soiled or stained laundry items, (c) measuring detergents, (d) increasing or decreasing the amount of detergent, and (e) changing the water temperature.

Out of those who responded to the questionnaire, garment replacement costs from which new stains were removed totaled $7,386; and garment replacement costs from which old stains were successfully removed totaled $1,339. Another 125 respondents tried to remove stains from garments they normally would take to the dry cleaners for estimated savings of $626.

Information. For additional information, contact: Thelma Thompson, c/o Textile, Clothing and Design Department, 234 Home Economics Building, University of Nebraska-Lincoln 68583-0802.

KAISER, Carol S. "The Effects of Discussion Time and Public Commitment on Changing Mothers' Child Feeding Practices." Dissertation, Doctor of Education, 1983, Rutgers The State University of New Jersey, New Brunswick.

Purpose. The purpose was to empirically test the effectiveness of the "Lunch and Learn" methodology compared to that of the traditional extension program. A secondary purpose was to empirically test the usefulness of public commitment in changing subsequent participant behavior.

Method. A field study involved 40 women in four treatments which were: 90 minute class, no commitment; 45 minute class, no commitment; 45 minute class with commitment; 90 minute class with commitment. Each class began with a 15 minute audio-filmstrip, followed by either a 30 or 75 minute discussion based on standard protocol. At the end of the commitment classes, the subjects were asked for a show of hands in response to a question about how many planned to utilize the knowledge gained in the class.

During the fifth week following the class, each subject was asked to answer questions on a telephone survey. Questions were formulated to determine what behavior, if any, was changed and if it was as a result of the class attended. The resulting ratio scores were analyzed by a 2 X 2 factorial ANOVA and by a one tailed *t* test.

Findings. The findings were that there was no significant difference in the scores on a behavior change measure between subjects in the 45 and 90 minute classes. A second hypothesis, the subjects in the public commitment classes would score higher than those in the no commitment classes, was not only not confirmed but the public commitment effect was significant in the opposite direction.

From this study, it was concluded that limited discussion time is not necessarily a deterrent to behavior change when used under certain conditions and that the variable, public commitment, merits further study.

Information. For additional information, contact: Carol S. Kaiser, Ed.D., Extension Home Economist, Middlesex County Extension, 7 Elm Row, New Brunswick, New Jersey 08901, Telephone: (201) 745-3445.

## OKLAHOMA

GLADIN, Jodie R. and CUPERUS, G. W. "Implementation of an Educational Pest Management Program for Public Housing Authorities and Economically Disadvantaged Oklahomans in Public Housing." Staff Study, 1985, Oklahoma State University, Stillwater.

Purpose. An evaluation of pest problems and pesticide usage of the Oklahoma City Housing Authority (OCHA) tenants and management personnel, was conducted to determine the need for reorganizational efforts of their current pest management strategies. Training material was developed as an aid in pest management education for both management personnel and tenants.

Method. A 37 question enumerator survey was taken of a stratified random sample of tenants in each of three housing styles (low rise apartments, single family dwellings, and high rise (senior citizens) apartments). A total of 239 people were surveyed. Questions pin-pointed primary pests, pest location, frequency of pest problems, pesticide usage, current pest control practices and sources information on pest control. Analysis of the survey was accomplished using the frequency of responses answered and an analysis of variance for tests of interaction between age and pesticide usage. OCHA pesticide purchase orders over a five-year period were examined to determine what modifications in pest management could be economically incorporated into the budget.

A video tape of the principles of cockroach management was developed along with a pamphlet on general household pests. The material would be delivered at a one-hour program for each of the low rise apartment units and to the managers of all the property sites.

Findings. Preliminary analysis of the survey shows predominately single women head of households who obtain information on pest control, do so from either the property manager or the housing authority pest control operator. Roaches, rodents and spiders were cited as the major year long pests and insecticide sprays and boric acid dusts were the most preferred products. Low rise apartment dwellers spent the most in insecticides while high rise tenants spent the least. Tenants in the 35-55 age bracket purchased more insecticides than any other age bracket. Kitchens and bathrooms were cited as the primary roach locations and fly swatters and sticky traps were the preferred non-chemical pest control method. Primary pest control products of the OCHA were boric acid dusts, EC sprays and rodenticide bait pellets.

Information. For additional information, contact: Jodie R. Gladin, 501 LSW, Oklahoma State University, Stillwater, Oklahoma 74078, Telephone: (405) 624-5527.

WILLIAMS, Sue E. and BRAUN, Bonnie S. "Economic Impact of Energy Education for Limited Resource Households." A Research Paper, 1985, Oklahoma State University, Stillwater, OK and Virginia Polytechnic Institute and State University, Blacksburg.

Purpose. Since 1977, an energy education program has served approximately 20,000 limited resource households in Oklahoma. Extensive data on content, methodology and impact has been amassed. Reported here is a sub-research component testing benefit-cost analysis which has application to other Extension programming. This research analyzed the impact of self-help changes made by limited resource household energy use and increase comfort of their households. A benefit-cost model was used to assess the economic impact that self-help efforts had on the energy use of private households and further the potential impact on society in general. It was assumed that an aggregate of conditions including an educational project contributed to the households' decisions to adopt energy conservation practices.

Method. The sample for the study was 166 limited resource households. A pretest and post-test design involving three measures of household energy conservation practices was used to asses extent of change during the one year study period. An analysis of variance procedure was used to determine if a significant difference existed between the average number of conservation practices present in participant households at each data collection point. Empirical and benefit-cost analyses were used to provide timely information for policy-makers regarding the role of self-help energy conservation efforts stimulated by education targeted at limited resource households.

Findings. The analysis of variance indicated significant difference at the .0001 level. Paired t-tests completed on the mean number of practices present at each of the three data collection points, indicated that all means were significantly different at the .0001 level. Benefit-cost analysis performed using three discount rates resulted in positive net present values for the stream of benefits and costs associated with the adoption of energy conservation practices by limited resource households. In addition, benefit-cost ratio values calculated from three perspectives (society, the project, funding agency and participant households) were 1.72, 4.07 and 5.27, respectively, using a 6 percent real discount rate. These findings led to the conclusion that society, the funding agency and participant households accrued significant economic benefits. The research demonstrates the potential economic benefit of the energy education for limited resource households.

Information. For additional information, contact: Sue Williams, Extension Energy Mgt. Specialist, Oklahoma State Univ., 147 Home Econ. West, Stillwater, OK 74078, Telephone: (405) 624-6825.

## OKLAHOMA

WILLIAMS, Sue E. and BRAUN, Bonnie S. "Economic Impact of Energy Education For Limited Resource Households." Project Impact Assessment, 1984, Oklahoma State University and Virginia Tech.

Purpose and Scope: This research analyzed the impact of self-help changes made by limited resource households (low-income, aged, isolated and handicapped) to reduce household energy use and increase comfort of their households. A benefit-cost model was used used to assess the economic impact that self-help efforts had on the energy use of private households and further the potential impact on society in general. It was assumed that an aggregate of conditions including an educational project contributed to the households' decisions to adopt energy conservation practices.

Methods: The sample for the study was 166 limited resource households. A pretest and post-test design involving three measures of household energy conservation practices was used to assess extent of change during the one year study period. An analysis of variance procedure was used to determine if a significant difference existed between the average number of conservation practices present in participant household at each data collection point. Empirical and benefit-cost analyses were used to provide timely information for policy makers regarding the role of self-help energy conservation efforts stimulated by education targeted at limited resource households.

Findings and Conclusions: The analysis of variance indicated significant difference at the .0001 level. Paired t-tests completed on the mean number of practices present at each of the three data collection points, indicated that all means were significantly different at the .0001 level. Benefit-cost analysis performed using three discount rates resulted in positive net present values for the conservation practices adopted by limited resource households. In addition, benefit-cost ratio values calculated from three perspectives (society, the project funding agency and participant households) were 1.73, 4.07 and 5.27, respectively, using a 6 percent real discount rate. These findings led to the conclusion that society, the funding agency and participant households accrued significant economic benefits. These research demonstrates the potential economic benefit of the energy education for limited resource households.

Implications: Empirical findings suggest that participant households made significant housing and behavioral changes in an effort to reduce residential energy use. This finding demonstrates that limited resource households, given adequate information and motivation, will adopt self-help energy management strategies.

Information: Contact: Dr. Sue Williams, 337 HEW, Oklahoma State University, Stillwater, OK 74078.

MORROW, Alice Mills. "Factors Related to Estate Planning Knowledge and Estate Planning Actions of Married Individuals." Program Evaluation, 1985, Oregon State University, Corvallis.

Purpose. The purposes of this study are to identify factors related to estate planning knowledge; to determine whether or not approximately eight to sixteen months after completing Extension estate planning workshops, participants have greater estate planning knowledge than a matched sample of nonparticipants; to determine the factors related to taking estate planning actions; and to determine whether approximately eight to sixteen months after completing Extension estate planning workshops participants completed more estate planning actions than a matched sample of nonparticipants.

Method. Eight hundred and eight estate planning surveys were sent to 404 households. Two surveys were sent to each household; one to be completed by the wife and one to be completed by the husband. One hundred and sixty-one households were sent surveys in January 1983. The names for this portion of the sample came from (1) attendance records from Extension estate planning workshops held between September 1981 and April 1982 and (2) telephone directories for the counties in which workshops were held. Two hundred and forty-three households were sent surveys in January 1984. The names for this portion of the sample came from (1) attendance records from Extension estate planning workshops between September 1982 and April 1983 and (2) telephone directories for the counties in which workshops were held. Four hundred and six individuals returned the surveys. The responses analyzed were the married men (n=173) and married women (n=175). This sample was further divided into four subsamples: married men with and without minor children and married women with and without minor children. A Pearson Product Moment Correlation was used to assess the relationship between knowledge scores and eight variables, to relate action scores to eight variables, and to relate total knowledge to total action. T-tests were used to compare knowledge scores of Extension workshop participants and nonparticipants.

Findings. The data support the conclusion that attendance at Extension workshops was related to higher estate planning knowledge scores. Of the three factors statistically related to total estate planning knowledge (income, estate size, and Extension workshop participation), the strongest correlations were between knowledge and workshop participation in two subsamples: married men with minor children and married women with no minor children. The Extension workshops appear to have more effect on estate planning knowledge than on estate planning actions.

Information. For additional information, contact: Alice Mills Morrow, Extension Family Economics Specialist, College of Home Economics, Corvallis, Oregon 97331, Telephone: (503) 754-3211.

ALCORN, Nancy E. "Selected Clothing Practices of Extension Homemakers." Paper, Master of Education, 1985, The Pennsylvania State University, University Park.

Purpose. This study examined selected clothing practices of homemakers participating in the Extension Family Living and EFNEP Programs. Clothes selection and shopping practices were compared for differences as they related to age, income and family size.

Method. A questionnaire was mailed to 205 homemakers (105 subscribers of Around the House, 100 EFNEP homemakers) randomly selected to participate in the study. Information for the study was obtained from 124 of the 125 surveys returned (91 Around the House homemakers, 34 EFNEP homemakers). The data were analyzed using frequency distributions.

Findings. Results suggest some relationships did occur among certain variables. The study revealed most homemakers bought clothing as needed. However, younger homemakers, those with low incomes, and homemakers with larger families tended to buy clothing when money was available. Homemakers in all age groups and income levels preferred the department store for purchasing many clothing items. Relationships did exist between age and income and store preference for purchasing certain articles of clothing. The study suggested little or no relationship between factors considered in clothing selection and age and income. Relationships existed between age and kind of clothing worn by family members for half the clothing items studied. Younger homemakers, those with lower incomes, and homemakers with larger families more often paid for clothing using cash. As the age and income of the homemaker increased, the frequency of using charge accounts to pay for clothing also increased. Young homemakers and those with lower incomes made greatest use of lay-away for clothing purchases.

Information. For additional information, contact: Nancy E. Alcorn, Extension Agent, Allegehny County Extension Office, Penn Liberty Plaza, 1520 Penn Avenue, Pittsburgh, PA 15222, Telephone: (412) 392-8540.

JOCHEN, Dorothy M. "The Development of a Program for Microwave Oven Users." Paper, Master of Extension Education, 1986, The Pennsylvania State University, University Park.

Purpose. The specific objectives were: (1) to review literature of research done on the microwave oven; (2) to examine educational programs on microwave oven cooking; and (3) to develop an educational plan for understanding and using the microwave oven for Cooperative Extension Service home economics professionals to use with their clientele.

Method. To determine what Extension personnel were doing in microwave cooking education in other states, letters were sent out asking for information on what has been done and what is available. Requests were made of the Cooperative Extension Service Program Specialists, Foods and Nutrition Specialists and Home Management Specialists throughout the United States. Thirty-three of fifty states responded.

Findings. Four states have 4-H programs, and Michigan is in the process of developing a program focusing on microwave cooking. Twelve states have correspondence-home study courses, and South Carolina has developed a course ready for publication. Other programs may be available or there may be booklets for classes, but where correspondents did not specify such, it was not assumed. Where fees were charged, it was noted. Some states may have fees but did not specify it.

The need for consumer help in using and operating the applicance was documented, not only because the method of operation is new, but also because of limited information and/or resources. The general acceptance and ownership of the microwave oven was shown by the buying trends and overall enthusiasm towards information and classes. A basic, educational outline was presented for initiating consumer microwave oven cooking presentations in the Pennsylvania Cooperative Extension Service program. Suggestions were made for a series of demonstrations with resource information, evaluation, and handouts for the clientele.

Information. For additional information, contact: Dorothy M. Jochen, 226 Spring Street, State College, PA 16803.

HALLMAN, Patsy J. "Factors that Motivate Young Adults to Study Etiquette." Faculty Research, 1985, Stephen F. Austin State University, Nacogdoches, Texas.

Purpose. The purpose was to identify factors which motivate university students and other young adults to enroll in etiquette courses. The contribution of good manners to success in the business, as well as the social, world is a concept rapidly being adopted by individuals and corporations across the country. University students and other young adults are showing increasing interest in the topic, and this study examined this trend.

Method. A questionnaire was presented to university students enrolled in etiquette classes at Stephen F. Austin State University during the 1985-86 school year and to young adults who enrolled in a non-credit etiquette class during that same time period. Participants were surveyed to determine reasons for their individual decisions to enroll in the classes as well as for ways they learned about the courses. Additionally, course evaluations were completed anonomously at the end of the fall semester. Results of the surveys and of the evaluations were analyzed.

Findings. University students were motivated to study etiquette in a formal class by the need to become more self-confident, more knowledgeable about good manners, and more adequately prepared to enter the world of the professional. From the sample of 150 people, 78.4 percent learned about the courses from a friend. Young adults who took the non-credit course learned of the courses from brochures sent to their businesses. The majority of the young adults taking the non-credit courses indicated that they took the course to improve their professional image. On the course evaluations, students were asked to rate the course by eleven criteria using a scale of one to five, with one being the highest rating. The mean score for all eleven criteria was 1.30. Comments made at the end of the evaluation indicated that all students had positive reactions to the course, and many wrote that it should be taken by all persons preparing to enter the professional world. The study suggested that etiquette is an increasingly popular area of study for young adults.

Information. For additional information, contact: Patsy Hallman, Professor, Department of Home Economics, SFA Box 13014, Nacogdoches, Texas 75962.

# VIRGINIA

BRAUN, Bonnie S. "Virginia Extension Homemakers Future Study." Staff Study, Virginia Cooperative Extension Service, 1985, Virginia Tech, Blacksburg.

Purpose. For 60+ years, the Extension Homemakers and the Cooperative Extension Service have been striving for quality educational programs. Membership in Virginia peaked at 44,000 and fell to a low of 9,000. By 1983 both organizations sought ways to offer vital, appropriate educational programming that would attract and hold members toward the year 2000. To that end, a Future's committee with membership from both partners was established. The committee found pervasive confusion regarding the purpose and value of VEH and the extent and types of support needed from VCES. Thus, in 1984 a study was commissioned to describe the VEH in terms of organizational purpose, image, membership, programs, volunteer leadership, VCES/VEH relationships, and impact on the individual, community and the Commonwealth.

Method. Three volunteer survey teams were organized with membership from both VCES and VEH. A coordinator was hired. About 80 persons helped in the development, delivery, analysis and reporting. Information was collected from three groups: 1) All EHE advisors and specialists as program providers (80% return); 2) Random sample of 3,000 EH members as program participants (40% return) and 3) 100 community leaders in rural and urban areas as program observers (100% phone interviews). Statistical analysis was conducted. Two separate committees of VCES and VEH members studied the findings and sent recommendations to the Future's committee who amalgamated them and released a set for discussion by all members and significant others. A final set will be submitted for acceptance by both organizations following the NEHC meeting.

Findings. Findings are grouped in the categories of participant profile; purpose and benefits of VEHC, P.O.W. areas, agent assistance. The group consisted of older, white women with a high level of schooling living in rural areas with an average membership of 15 years who shared educational information with 19 others. All groups with differing degrees agreed education is an important purpose. The three groups differed widely in their reports of activity with less than 50% of community leaders aware of the community service claimed by over 80% of EH members. EH members desired less assistance from agents than agents thought. Currently 29% of agents' time goes to EH costing $1.2 million or $100/member. Members reported saving an average of $63.

Information. For additional information, contact: Bonnie Braun, Associate Director, 4-H/HE, 336 Burruss, Blacksburg, Virginia 24061, Telephone: (703) 961-6708.

## VIRGINIA

HERTZLER, Ann A. "Iron Intake of EFNEP Homemakers and Factors Influencing Dietary Change." Staff Study, 1985, Virginia Polytechnic Institute and State University, Blacksburg.

Purpose. The purpose was to evaluate the effectiveness of a nutrition education program focusing on iron in changing dietary behavior of EFNEP homemakers and to study how instructional methods and the family situation were related to changes in dietary iron.

Method. One hundred eighteen EFNEP homemakers living in two rural and two urban adjacent counties were selected. One or more iron lessons were presented during a six-month period. A 24 hour recall was taken at the beginning of the first iron lesson and a month after the last iron lesson had been presented. Lesson activities for planning, shopping, and preparing iron rich foods were presented by the paraprofessional according to the homemaker's need and abilities. Family attributes rated by the technician were family atmosphere (e.g. feelings and communication among family members) and living conditions (e.g. number of living problems with which to cope). These ratings were considered indicative of the degree of family functioning and the opportunity for learning. Responses were tabulated for frequency descriptions and totaled for category scores. Pearson product - moment correlations were used to study relationships between the measures. A value of 0.30 or higher was considered significant.

Findings. The average dietary improvement for the entire sample was a 2.8 mg iron - a 15% improvement. Most homemakers received three or four lessons on iron over a two or three month period. Improvement in dietary iron was not related to the number or kinds of lessons or to the family atmosphere. Family make-up (e.g. single homemakers or homemakers with males in the household) did not explain dietary change. Further analysis showed that EFNEP homemakers with iron intakes above 75% RDA at either time period made the greatest change (3.8 mg); those below 50% RDA made the least change (1.2 mg). However, lesson activities were related to improvement in the low group for those with high ratings for family atmosphere and living conditions. Few relationships occured among these measures for the medium and high groups. The findings substantiate previous research illustrating the impact of lessons or family influence on food habits and argue for additional research to reveal factors that foster program successes.

Information. For additional information, contact: Ann A. Hertzler, Extension Specialist, Department Human Nutrition and Foods, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061, Telephone:(703)961-4673.

NEWHOUSE, Janette K. "Patterns of In-Home Care Service Use Among Older Adults: A Rural-Urban Comparison." Dissertation, Doctor of Philosophy, 1985, Virginia Polytechnic Institute and State University, Blacksburg.

Purpose. The purpose was to determine how patterns of in-home care utilization and predictors of service use differ for older adults based on whether they live in a rural or an urban environment and whether the service is provided from an informal, a formal, or a combination informal/formal source.

Method. This study was based on data from the Statewide Survey of Older Virginians, a probability sample of 2,146 non-institutionalized persons 60 years of age and older. The Statewide Survey, with the Older Americans Resources and Services (OARS) Multi-dimensional Functional Assessment Questionnaire as to the core instrument, was a household survey with a 87% response rate that included 8% of the respondents who participated via an informant.

A multiple regression analysis was performed for each of the eight subsamples into which the total sample was divided. The 20 independent variables were categorized according to Andersen's paradigm for conceptualizing service use as either predisposing, enabling, or need variables.

Findings. The results indicated that utilization rates of in-home care services were extremely low, and when services were used they were usually provided by informal sources (family, friends, and neighbors). Contrary to previous studies, these data showed that rural elders used in-home service slightly more often than urban older people.

Although the correlates of service use are still not well-understood, this study was congruent with prior investigations that indicated the need variables, according to the Andersen model, were significant more often than the other categories. Activities of daily living (ADL) performance was a significant predictor ($p < .001$) of service use across all subsamples.

Information. For additional information, contact: Dr. Janette K. Newhouse, Extension Specialist, Adult Development and Aging, 206 Wallace Hall, Virginia Tech, Blacksburg, VA 24061, Telephone: (703) 961-7657.

WOODARD, Janice E. "Using the Mail to Teach Consumers About Using Microwave Ovens." Staff study, 1984, 1985, Virginia Polytechnic Institute and State University, Blacksburg.

Purpose. The purposes were to determine: 1) extent to which the course "Using the Microwave Oven" helped participants with selected aspects of microwave oven usage; 2) extent of usefulness of each of the lessons; and 3) what type of persons participated in the course.

Method. A two-page mail survey was sent to about 19,068 participants at the conclusion of the course. The 10,068 in-state participants received the course from local Extension agents and about 9,000 out-of-state participants (readers of one national woman's magazine) received the course from the state Extension Distribution Center.

Ten aspects of microwave oven usage were scored in the evaluation: greater understanding of the topic, improved attitude about the use of microwave ovens, increased variety of ways of usage, increased frequency of use, increased confidence in microwave techniques, more nutritious meals for members of household, better use of leftovers, more efficient in energy use, improved quality of certain dishes, and time saved in meal preparation. A 4-point scale (4= very great to 1= little) was used to indicate the extent to which the lessons helped respondents achieve these goals.

The usefulness of each of the lessons was scored using the same 4-point system.

Findings. Results (n= 5,690) showed that all 10 aspects of microwave oven usage received mean scores of 3. Likewise all six lessons received mean scores of 3, indicating that all lessons were rated about equally useful.

About 64% of the 5,551 in-state respondents were 20-55 years of age; 56% of the 139 out-of-state respondents were in this age range. The mean size of the household was 2.8 for in-state respondents and 2.3 for out-of-state respondents.

The primary conclusion of the survey was that the course was an effective way to teach consumers about using the microwave oven.

Information. For additional information contact Janice Woodard, Extension Specialist, Home Management and Equipment, 230 Wallace Hall, Virginia Tech, Blacksburg, Virginia 24061, Telephone: 961-4789.

## WISCONSIN

BOYCE, Laurie Jean Johnson. "The Relationship Among Learning Projects Reported by Mothers of Young Children in Dual-Earner Couples, Family Life Events, and Well-Being." Ph.D. Disseration, 1985, University of Wisconsin, Madison.

Purpose. The purpose of this study was to determine the relationship among the number, nature and type of learning projects and perceived well-being of married, employed mothers of young children in dual-earner marriages. The study also looked at family life events that may motivate adult learning projects and affect perceived well-being. Adult learning projects can play a role in helping the married, employed mothers manage family life complexity. The study found learning projects were related to perceived well-being.

Method. Married, employed mothers of young children (n=154) were surveyed. The questionnaire consisted of three research instruments designed to measure adult learning projects, well-being, and family life events.

Findings. The typical respondent had participated in five learning projects over the past 12 months. These learning projects were largely self-directed and relied on four or more resources, often nonformal resources, such as talking with others or reading. The predominant area of interest was family, followed closely by career/job related learning projects.

Those mothers who listed a high number of learning projects and who reported a self-planned "most important" project had a higher level of perceived well-being. Also, those who ranked high in stressful family life events expressed a lower level of perceived well-being. Mothers who had self-planned their "most important" learning project expressed higher perceived well-being than those who used other planning methods. Self-directed learners used more resources than those learners who followed other planning approaches.

There were statistically significant correlations between number of learning projects and perceived well-being. Whether involvement in learning projects increases perceived well-being or whether those individuals who express higher well-being are involved in more learning projects warrants further investigation.

Information. For additional information, contact: Laurie J. Boyce, District Program Leader, Family Living Education, 610 Langdon Street, Madison, WI 53703, Telephone: (608) 262-9675.

## WYOMING

MELCHER, Linda M.; ELLENWOOD, Bonnie; HOLMES, Betty; and SHIPP, Rhonda. "Results of a Survey of Tomatoes Home Canned in Wyoming."

Purpose. The purpose of this study was to determine if selected homemakers were following the most recent USDA (1983) recommendations for home-canning tomatoes at high altitude; to determine if pH of tomatoes should be a concern; and to determine if more education is needed about home-canning recommendations.

Method. One hundred forty-two samples of tomatoes were collected from 71 home canners in Wyoming respresenting six counties at differing elevations. Each participant completed a questionnaire regarding canning methods and processing times. The samples were stored at 21° C. for eight months and then tested for aerobic microorganisms, mold, and fungi, with methods recommended in the *Bacteriological Analytical Method*. The pH of each sample was measured.

Findings. The survey revealed that five different processing methods had been used. Only one person had followed the USDA (1983) recommendations for water-bath canning of tomatoes. During the water-bath process, 75 samples (84%) were underprocessed by time and 30 samples (34%) contained bacterial growth. Only 5 of the 41 samples (12%) processed under pressure had bacterial growth. Four of the 5 had not been processed at pressures recommended for high altitudes. At least 50 percent of the samples processed with the steam canner, open-kettle and low-water level methods had measurable bacterial growth. The pH of the samples ranged for 3.7n to 4.5 with 8 percent at 4.4 or above. Any food with a pH above 4.6 must be pressure canned to destroy *Clostridium botulinum*. Under certain conditions, bacteria presence can increase the pH of canned tomatoes increasing the risk of *C. botulinum* producing a deadly toxin. This study suggests that pressure-canning may produce the safest products among home-canners. USDA should re-evaluate their recommendations for canning tomatoes and consider inclusion of recommendations for pressure-canning of tomatoes especially at high altitudes. Extension home economists should continue their efforts in educating the public about proper canning methods and processing times to reduce the amount of food spoilage and to eliminate the danger of botulism and food poisoning.

Information. For additional information, contact: Linda Melcher, Program Coordinator-EFNEP, P. O. Box 3354, University Station, Laramie, Wyoming 82071, Telephone: (307) 766-5181.

# WYOMING

TOELLNER, Marilyn J. "Comparison of Displaced Homemaker Needs with Programs." Paper, Master of Science, 1985, University of Wyoming, Laramie.

*Purpose*. The purpose of this study was to determine if there was any significant correlation between the needs of displaced homemakers as determined by a literature review, and the components of program offerings as listed in program descriptions received for displaced homemakers' programs.

*Method*. Letters requesting all the information available regarding their displaced homemaker program were sent to five national agencies, 23 state Departments of Education, 70 California junior colleges, 13 Arizona junior colleges, and seven Wyoming junior colleges. Other groups receiving letters were the Ford Foundation, Exxon Corporation, Wyoming Commission for Women, Displaced Homemakers Network and the Women's Equity Action League.

In response to 123 letters of inquiry, a total of 95 responses were received (77 percent response rate). Forty programs were rated by two or three of five expert judges according to topic or concern emphasized by the program. The needs were rated in the same manner according to their perceived importance of these needs. Using a Spearman Rank Correlation, a correlation index was established for each of 40 programs.

*Findings*. Using the Spearman Rank Correlation, the null hypothesis (that there would be no relationship between displaced homemaker needs and the content emphasis of the programs offered) was rejected.

According to the Literature Review, economic help is the most important need for displaced homemakers. However, the judges rated it as third in terms of need importance and in the programs this need was only slightly emphasized, being placed fifth.

The quality of the programs reviewed in this study were generally very good for the areas that they covered, however, they were too limited in scope. Many other needs of the displaced homemaker need to be met before he/she will be receptive to learning new job skills and actually beginning a job search.

*Information*. For additional information, contact: Marilyn J. Toellner, University Extension Agent, Carbon County, P. O. Box 280, Rawlins, Wyoming 82301, Telephone: (307) 328-2642.

# INTERNATIONAL

DIAZ, Daniel E. "A Proposal For the Social Analysis of Needs and Problems in an Agricultural Community in Panama: Tole Cabecera." Problem, Master of Agricultural Extension, 1985, University of Georgia, Athens.

Purpose. The purpose was to examine the relevant social variables influencing the adoption and diffusion process in the cultural content of Tole Cabecera, Panama, where the "Agricultural Technology Transfer" project was to be implemented. ATT is a project that is being used as a model for establishing a new Agricultural Extension Service in Panama. A secondary objective was to develop a survey instrument to be used in the social analysis of Tole Cabecera.

Method. A case study of Tole Cabecera was presented in this study. Information on the setting, population, housing situation, public services, education, employment and agriculture were compiled. This stude proposed to use the community reconnaissance method of sampling as a quick and efficient approach to determine relevant aspects of the social structure of a community as seen by a sample of positional leaders. Data would be gathered through interviews with 40 community leaders. A proposed random sampling of 200 farmers would be interviewed to provide a clear picture of the needs and problems of the farming system in the area. A questionnaire would be administered during interviews with the farmers.

Instrumentation. Two instruments were developed to collect relevant background information on the Tole Cabecera Community. The 'Nomination Quesitonnaire" provides a framework for identifying several types of leaders in the community such as: institutional, effectors and activists as well as specialized and general leaders. This report is concerned with variables that affect agricultural productivity in Tole Cabecera. The questionnaires would include these variables: community image, felt needs and problems, rating of community services and facilities, social processes, and leadership. An interview schedule would be administered to leaders and farmers in the community to obtain information on the agricultural component and on the social factors previously mentioned.

Information. For additional information, contact: Dr. Richard Rohs, Department of Extension Education, Lumpkin House, Cooperative Extension Service, University of Georgia, Athens, Georgia 30602. Telephone: (404)542-3151.

## GEORGIA

NEWBY, Lenita D. "Academic, Environmental and Occupational Factors Influencing the Role of International Students in Their Countries' Agricultural Development Process." Thesis, Master of Agricultural Extension, 1985, University of Georgia, Athens.

Purpose. The purpose was to determine how international students at the University of Georgia Perceive their current educational programs, future career goals, and home country situations (including economic, political, and cultural factors). A secondary objective was to determine how these factors affected the student's perception of their future role in their home country's development process.

Method. A questionnaire was mailed to 115 international agriculture students at the University of Georgia. The students were asked to indicate whether they perceived themselves playing a role in their country's development, and if so, to explain what kind of role they saw themselves playing. Other variables measured were program relevancy, home country economic situation, guaranteed employment, career advancement, and perceived re-entry problems. The Chi-square test of associations and the discrimenant analysis test were used to analyze the relationships among and between the variables.

Findings. The results indicated that there was a significant association between (1) perceived program relavancy, future plans and financial assistance and (2) their perceived developmental role. Students who considered their programs to be of average or high relavancy were more likely to play a role in their home country's developmemt. Of those students perceiving themselves as playing a role, 58.2% wanted to return home and 64.3% had obtained financial assistance.

Information. For additional information, contact: Dr. F. Richard Rohs, Department of Extension Education, Lumpkin House, Cooperative Extension Service, The University of Georgia, Athens, Georgia 30602. Telephone: (404) 542-3151.

KAMARUDIN, Zakaria B. "Adoption of Agricultural Innovations in a Malay Farming Community." Masters Study, 1985, Southern Illinois University, Carbondale.

Purpose. The primary purpose of this study was to analyze the nature of the relationships between the farmers' socioeconomic, personality, and communicational characteristics and their acceptance or nonacceptance of improved agricultural practices recommended by Extension. This type of investigation was purposeful in developing a better understanding of educational and change processes, and in providing a sound basis for planning and evaluating Extension education programs by Extension agencies.

Method. A questionnaire containing a series of interview questions was used by the researcher in conducting interviews. The interview questionnaire consisted of eight pages. An interview schedule was developed for the purpose of collecting necessary data from the respondents. Items (questions and statements) were designed so that responses would be obtained from the respondents in relation to the objectives stipulated for this study. The interview schedule contained the following parts: 1. Questions designed to obtain information on socioeconomic characteristics of respondents. 2. Statements designed to determine the respondent's personality. 3. Items analyzing the respondent's communications behavior. 4. Questions aimed at determining the level of innovativeness or the adoption of scores for each respondent. The population of the study consisted of the heads of the families of rice-growing farmers living in the district of Raub, Pahang, Peninsular Malaysia. A total of 120 farmers were randomly selected, and they constituted the study sample for this investigation.

Findings. The evidence from this study indicated that approximately one-half of the Malay peasant farmers' degree of innovativeness could be predicted when income levels, degree of traditionalism, frequency of contacts with Extension, family size, and years of schooling were known. Significantly innovative farmers had to some degree the following specific characteristics: (1) Younger (2) More years of formal education (3) Fewer family members (4) Larger amount of land used in agricultural operation (5) Fewer years of farming experience (6) Higher income (7) Belief in the priority of modern authority (8) Emphasis in "personal control" of their future (9) Participation in community activities (10) More contacts with Extension.

Information. For additional information, contact: Dr. James Legacy, Chair, Agricultural Education and Mechanization, Southern Illinois University at Carbondale, Carbondale, Illinois 62901, Telephone: (618) 536-7733.

NYAMAI, J. M. S. "Inservice Training Needs of Agricultural Extension Agents in Kiambu District, Kenya." Master's Study, 1985, Southern Illinois University, Carbondale.

Purpose. The purpose of this study was to determine technical and pedagogical needs of extension agents in Kiambu District. The objectives were: (1) to determine what inservice training in new technology and improved husbandry practices extension agents had received during 1983 and 1984. (2) to determine the current technical training needs of extension agents, and (3) to determine the current teaching methods training needs of extension agents.

Method. The study population consisted of 164 extension agents working in the Kiambu District of Kenya. Random sampling was used to select 80 extension agents who participated in this study.

A closed form questionnaire was designed to collect the data. This was used to make the questionnaire easy to complete and also to improve response. Part one of the questionnaire dealt with the general information about the extension agents such as age, professional qualifications, and work experience. Part two of the questionnaire dealt with the inservice training received during 1983 and 1984 by extension agents. The extension agents were asked to indicate what inservice training they had received in the past two years in crop production, livestock production, farm management, land development, and extension education methods. Part three of the questionnaire dealt with inservice training needed. The extension agents were asked to indicate their current inservice training needs in two major areas of crop production and livestock production.

Findings. Based on the findings of this study, the following conclusions were made: 1. Extension agents had unmet inservice training needs during 1983 and 1984. 2. Extension agents needed inservice training in crop production, livestock production, farm management, and land development. 3. Extension agents needed inservice training in extension teaching methods and program development.

Information. For additional information, contact: Dr. James Legacy, Chair, Agricultural Education and Mechanization, Southern Illinois University at Carbondale, Carbondale, Illinois 62901, Telephone: (618) 536-7733.

CHU, Lee. "A Needs Assessment of the Inservice Training Program for Agricultural Extension Advisors in Taiwan." M.S. Thesis, 1985, Iowa State University, Ames.

Purpose. The purpose was to assess the inservice training needs of local agricultural extension advisors in Taiwan. The objectives were: (1) to identify and rate the importance of the inservice training needs as perceived by the agricultural extension advisors, (2) to ascertain the extension advisors' attitudes towards the effectiveness of the existing training program in fulfilling the identified needs, and (3) to determine if significant differences or relationships existed between training need ratings and selected demographic characteristics.

Method. Out of the 1549 local extension advisors in Taiwan, 300 were selected using a proportional stratified sampling method. A questionnaire was developed and mailed to the sample. The advisors were asked to rate the importance of 40 selected training need items using a five-point scale where 1 indicated minimum degree of importance or satisfaction and 5 indicated maximum degree of importance or satisfaction. A total of 211 (70.3%) questionnaires were returned and 195 (65.0%) were found to be complete and usable. The 40 items were grouped into eight areas: (1) introduction to agricultural extension, (2) agricultural policy, (3) planning and evaluation, (4) extension organization, (5) leadership, (6) teaching techniques, (7) producing educational media, and (8) administration. Means and standard deviations were computed for each area. Analysis of variance and Pearson product-moment correlation procedures were used for analysis with appropriate demographic variables.

Findings. More than 55 percent of the participants indicated a positive attitude towards the sufficiency of previous inservice training programs. The three most important training need areas were: leadership, introduction to agricultural extension, and agricultural policy. The advisors were least satisfied with the preparation they had received for the following three training need areas: agricultural policy, producing educational media, and extension organization.

Most of the relationships between training need areas and selected demographic variables were negligible. Advisors with less than five years of experience were significantly less satisfied with the training in the areas of extension organization, teaching techniques, producing educational media, and administration.

Information. For additional information, contact: W. Wade Miller, Associate Professor, Department of Agricultural Education, 201 Curtiss Hall, Iowa State University, Ames, IA 50011, Telephone: (515) 294-5872.

SAJILAN, Sulaiman Bin. "Teaching Competencies Needed by Extension Workers in Transferring New Agricultural Technologies to Farmers in Malaysia." Thesis, Master of Science, 1985, Iowa State University, Ames.

Purpose. The primary purpose of the study was to determine the pedagogical skills perceived to be needed by Malaysian Extension agents in transferring new agricultural technologies to farmers. Secondary objectives were to determine when these teaching skills should be learned and the amount of time spent on Extension education compared to Extension administration activities.

Method. A fixed response, self-administered questionnaire was mailed to 106 former Malaysian agricultural extension agents attending various institutions of higher education in the United States during the 1984-85 academic year. The questionnaire consisted of 53 teaching competency statements. A five-point scale was used for rating the importance of each competency. A three-point scale was used for indicating when the competency should be learned, ie - inservice education. Because this study was descriptive in design, the data were analyzed using frequencies, percentages, means, and standard deviations.

Findings. Most of the competencies were considered to be important, but the competency statements under the category of teaching aids/tools showed a great variation. Respondents thought that traditional teaching methods were more effective because of the culture and the fact that many farmers were illiterate. Seven of the 53 competencies were verified to be learned on-the-job. Nine competencies were verified to be a part of a Diploma or Baccalaureate program. The respondents were evenly divided as to when 37 of the competencies should be learned. The respondents reported that only a small percentage of their working time was devoted to educational programming.

The results of the study suggest that there is a need to place greater emphasis on educational methodology and training on how to use the methodology in the Malaysian Extension System.

Information. For additional information, contact: Robert A. Martin, Department of Agricultural Education, 217B Curtiss Hall, Iowa State University, Ames, Iowa 50011, Telephone: (515) 294-0896.

SANGGIN, Spencer Empading. "Characteristics and Needs of Farmers in Sixteen Universities Pertanian Malaysia Sarawak Extension Villages and Their Implications to Extension Program Planning." Thesis, Master of Science, 1985, Iowa State University, Ames.

Purpose. The purpose of the study was to identify the problems and determine the needs of farmers in selected Extension villages in Malaysia. Specific objectives included identifying the personal and socio-economic status of farmers, identify the infrastructures and facilities available to farmers, identify current agricultural practices and identify perceptions of farmers regarding the quality of Extension programs.

Method. A questionnaire and interview schedule was developed and pretested for content validity among 20 farmers in the Extension villages. Ten university students were employed and trained as interviewers to collect the data. Five hundred fifty-one interviews were conducted. Questions focused on current agricultural practices, number and kinds of farm animals, socio-economic status, participation in Extension programs, perceptions of quality of Extension programs, and demographic characteristics of farmers. Statistical analysis of the data included frequencies, percentages, means, and standard deviations.

Findings. The results indicated that farmers in the Extension villages were generally characterized by a high rate of illiteracy, low income, and having small farms. Not every family in the Extension villages had electricity and piped water. Rice was the only crop extensively grown by farmers. Rice was the main food crop. The adoption of recommended agricultural practices was moderate. The problem of pests and diseases was critical to crop production. Facilities for storage were inadequate. Poultry was the main animal raised by farmers. Farmers indicated a great need for Extension and advisory services, agricultural credit services, and marketing information services. The study indicated an over-dependency on government assistance programs. Friends and relatives and the State Department of Agriculture were considered to be the primary sources of new information. Most farmers perceived Extension programs as being helpful to them, although not all farmers took advantage of these programs.

Information. For additional information, contact: Robert A. Martin, Department of Agricultural Education, 217B Curtiss Hall, Iowa State University, Ames, Iowa 50011, Telephone: (515) 294-0896.

MAMMY, Edward J. "Application of Farming Systems Research and Extension Approach in the Improvement of Agricultural Production in Sierra Leone." Master of Science Thesis, 1985, Louisiana State University, Baton Rouge.

Purpose. The purpose was to characterize Farming Systems Research and Extension (FSR) in the Adaptive Crop Research and Extension Project (ACRE) in Sierra Leone, West Africa and demonstrate its effectiveness in contrast to previous developmental strategies.

Method. Published materials and personal experience of the researcher (who is the Extension Coordinator in the ACRE project) were the chief sources of information.

The FSR framework was used to compare the effectiveness of the ACRE and Mechanical Cultivation Package Program (MCCP). ACRE contact farmers and non-ACRE farmers were also compared to evaluate the ACRE program.

Findings. ACRE was more effective than MCCP in meeting the needs of farmers because it established a machinery to gather baseline and follow-up data on agro-economic conditions and individual farm problems. MCCP used a typical top-down developmental approach recommending cultivation programs involving unrealistic goals and resources. ACRE used a problem-solving, intensive educational approach to reach farmers, while MCCP emphasized "completion of targets" without involving farmers in decisions about their individual situations. ACRE employed a multi-disciplinary team of agricultural economists, soils and crop specialists, and agronomists working with Extension staff to work with farmers. MCCP relied mostly on developmental workers who did not have technical support to solve complex subject-matter problems in the field. A number of institutions collaborated with ACRE to provide needed program support, whereas MCCP was supported only by the Ministry of Agriculture.

Sixty percent of ACRE contact farmers had adopted improved rice production practices compared with only 14 percent of non-ACRE farmers. The former were serviced by ACRE Extension workers while the latter had the benefit of help from Ministry of Agriculture Extension staff.

ACRE demonstrated to agricultural and rural development planners the value of the FSR approach in development, and the Extension strategy of disseminating farm-based research through key cooperators to the larger agricultural community.

Information. For additional information, contact: Edward J. Mammy, Extension Coordinator, Njala University, Freetown, Sierra Leone, West Africa.

## MISSOURI

AL-SHENAIFI, Mohammed S. "Crop Production Activities Performed by Farmers and Agricultural Extension Workers in Qasim, Saudi Arabia." Dissertation, Doctor of Philosophy, 1983, University of Missouri-Columbia.

Purpose. The primary purpose of the study was to ascertain the crop production activities performed by farmers and the crop production activities that can be performed by agricultural extension workers. The secondary purposes were: (1) to compare the perceptions of farmers concerning the importance of the crop production activities they performed when grouped on the basis of education, years of work experience, nationality and age, and (2) to compare the perceptions of agricultural extension workers regarding the crop production activities they can perform when grouped on the basis of the same selected demographic characteristics.

Method. Data were collected from 45 of 48 agricultural extension workers and 100 farmers selected randomly. One hundred thirty-two competency statements were used in the questionnaire. Data were analyzed using chi-square and one-way analysis of variance procedures. Null hypotheses were tested at an alpha level of .05.

Findings. Forty-nine of the 132 activity statements in the instrument were found to have significantly different frequency response ratios between the farmers and the agricultural extension workers. Five of the eight categories in the instrument were found to have significant difference between the responses of the two groups. Significant differences were found among the means of agricultural extension workers for the variables of age, years of work experience, and nationality.

It was found that agricultural extension workers could not perform six of the activities to the extent that farmers could and also found that a large number of agricultural extension workers could not perform selected crop production activities. Therefore, it was concluded that agricultural extension workers could profit from in-service training in selected areas of crop production, especially in the areas of agricultural mechanics and irrigation.

It was found that a large number of farmers could not perform a large number of crop production activities. Therefore, it was concluded that the farmers could profit from educational programs in selected areas of crop production, especially in the area of agricultural mechanics.

Information. For additional information, contact: Education Academic Affairs, University of Missouri-Columbia, 109 Hill Hall, Columbia, Missouri 65211, Telephone: (314) 882-8311.

## OHIO

HTAY, Than. "Potential Teaching Strategies for Adult Education in Burma." Project, Master of Science, 1985, The Ohio State University, Columbus.

Purpose. The purpose of this project was to develop a comprehensive handbook which could serve as a ready reference of teaching strategies for Burmese educators in the Extension service.

Method. Literature related to methods of teaching adults was reviewed to identify appropriate techniques for the culture and teaching/learning environment. Appropriate teaching strategies were grouped under the major topics of "Types of Meetings" and "Methods Within Meetings." Each strategy was divided into five sections so that the user could easily understand the specific characteristics of the strategy. The sections are described as "What", "How," "Why," "Advantages" and "Disadvantages."

Findings. Nine different "Types of Meetings" are presented. The "Methods Within Meetings" were subdivided into four formal or stage presentations, 14 discussion techniques, two demonstration methods, field trips and tours and teaching with film, film-strips and slides.

The appropriateness of the techniques are discussed and implications drawn for Burma.

Information. For additional information, contact: Larry E. Miller, Department of Agricultural Education, 208 Agricultural Administration Building, 2120 Fyffe Road, The Ohio State University, Columbus, Ohio 43210-1099, Telephone: (614) 422-6672.

# OHIO

SHIBAH, Mohammed. "Analysis of the Agricultural Competencies Needed by the Farmers in Al-Hassa Oasis in Saudia Arabia." Ph.D. Dissertation, 1983, The Ohio State University, Columbus.

Purpose. The purpose of the study was to describe the agricultural competencies needed by the farmers in the Al-Hassa Oasis in Saudi Arabia and to determine which extension teaching techniques the farmers preferred.

Method. A three-part questionnaire, developed and validated for this study, was used to interview a sample population of the farmers in Al-Hassa in order to gather the data necessary to meet the objectives which were to describe the farmers according to selected demographic characteristics; to identify the relative importance as perceived by the farmers, of specific agricultural competencies in six categories of agricultural practice and to identify the extent of knowledge the farmers possess about those competencies; to calculate the farmers' training needs using the Borich formula; to determine the relationship between the selected demographic characterisics of the farmers and their calculated training needs; and to identify selected extension teaching techniques that the farmers most preferred and to determine the relationships between demographic characteristics and preferred techniques.

Findings. The principal findings consist of rankings that show the agricultural competencies in which the farmers in Al-Hassa most need training and the extension teaching techniques by which they preferred to be taught. Low and negligible relationships were found between demographic characteristics and the training needs of the farmers; relationships were discovered between preferred techniques of teaching and the variables of literacy, age and farming status (full- or part-time). These findings should enable extension planners to formulate more directed programs in attempting to assist the farmers in Al-Hassa.

Information. For additional information, contact: Dr. Mohammed Shibah, Assistant Professor, College of Agriculture, King Saud University, Riyadh, Saudi Arabia, or Dr. L. H. Newcomb, Professor, The Ohio State University, 208 Agricultural Administration Building, Columbus, Ohio 43210, Telephone: (614) 422-6321.

AYEWOH, Michael E. "The Professional Competencies Needed by Agricultural Extension Agents in Bendel State of Nigeria." Thesis, Doctor of Philosophy, 1983, The Pennsylvania State University, University Park.

Purpose. The main purpose of this study was to identify the professional competencies needed by extension agents in the Bendel State of Nigeria Ministry of Agricultural and Natural Resources, as perceived by the extension personnel. A secondary purpose was to determine when the professional competencies should be learned, and a tertiary purpose was to describe who would benefit most once the agricultural extension agents acquired these competencies. The secondary and tertiary purposes were based upon the perceptions of the agricultural extension agents or local government area (LGA) staff.

Method. The study utilized two groups of extension personnel within the Bendel State Ministry of Agriculture and Natural Resources: (1) State extension staff, and (2) local government area staff. A survey instrument was developed which included selected extension personnel's biographic and experiential characteristics and 61 professional competency statements. These competency statements were classified: Administration and Supervision, Program Planning, Program Execution, Program Evaluation, Teaching, Communication, Understanding Human Behavior, and Young Farmers' Club. A stratified random sample consisting of 50 State and 120 local government area staff personnel were mailed a questionnaire.

Findings. Analysis of variance results indicated no significant differences between the State and LGA staff regarding their perceptions of the need for competencies in: (1) Program Planning, (2) Program Execution, (3) Program Evaluation, (4) Teaching, (5) Communication, (6) Understanding Human Behavior, (7) Young Farmers' Club. A statistically significant difference was observed in the Administration and Supervision competency category.

Maximum $R^2$ Improvement Stepwise Technique was used to assess the relationship of selected biographic and experiential characteristics of extension personnel and their perceptions of the need for extension agents' competency in the eight professional competency categories.

Information. For additional information, contact: Michael Ayewoh, Instructor, Harrisburg Area Community College, Harrisburg, PA 17126 or Ed Yoder, Department of Agricultural and Extension Education, The Pennsylvania State University, University Park, PA 16802, Telephone: (814) 863-0443.

# PENNSYLVANIA

DAMRONGKIATTISAK, Wittaya. "Communication Effectiveness Between Commune Extension Agents and Rice Farmers in Chiang Mai, Thailand." Thesis, Doctor of Philosophy, 1984, The Pennsylvania State University, University Park.

Purpose. This study focused on the communication effectiveness between the Commune Extension Agents (CEAs) and the rice farmers (contact farmers and average farmers) in Chiang Mai Province, Thailand, by investigating selected personal and institutional factors related to levels of communication effectiveness. Communication effectiveness was measured by farmers' responses to practices recommended by the CEAs.

Method. Data were collected from farmers by personal interview using structured interview schedules and from the CEAs by questionnaires. Respondents included the 36 CEAs in the District of San-sai, San-kamphaeng, and Mae-taeng and 144 rice farmers from those districts, identified through a multi-stage random sampling process. The Spearman-Brown split-half method for establishing reliability resulted in coefficients of reliability for the various sub-scales ranging from .74-.91. Instrument face validity was established through pretesting with CEAs and rice farmers not in the study.

Findings. Major results of the study were: (1) the net communication effectiveness mean between the CEAs and the contact farmers was 58.5 percent; (2) the net communication effectiveness mean between the CEAs and the average farmers was 39.3 percent; (3) CEA's biographic factors showed no significant relationship to communication effectiveness; (4) CEAs' job satisfaction was positively ($r=.58$ $p <.001$) associated with communication effectiveness; (5) farmers' motivation for and involvement in seeking information was signficiantly related to communication effectiveness; and (6) the CEAs' expectations fulfillment as perceived by farmers was positively and significantly related to communication effectiveness. A developmental model for predicting communication effectiveness between the CEA and the contact farmer was developed. The results of the study substantiated the principal hypothesis of the study that communication effectiveness is affected by the roles played by the communicator, receiver, and perceptual interpersonal relation variables.

Information. For additional information, contact: Wittaya Damrongkiattisak, Associate Director of Extension, Maejo Institute of Agriculture Technology, San-sai, Chiangmai, Thailand 50290 or Ed yoder, Department of Agricultural and Extension Education, The Pennsylvania State University, University Park, PA 16802, Telephone: (814) 863-0443.

EASTER, Glenn W. "Assessment of Professional Competencies Needed by Extension Agents in Developing Countries: Case Study in Swaziland." Thesis, Doctor of Philosophy, 1984, The Pennsylvania State University, University Park.

Purpose. The primary purpose of this study was to identify and assess the professional competencies needed by the Swaziland Ministry of Agriculture and Cooperatives extension workers (agents). The secondary purpose was to determine whether extension personnel perceived the competencies should be learned during preservice or inservice education.

Method. National and district staff, local supervisors, and local agents were sampled. The inability of obtaining a random sample required the researcher to attempt to survey the entire population. Thirty national/district staff, 23 local supervisors, and 125 local agents (combined, 47% of the total population) completed questionnaires. A questionnaire was used to collect information concerning the demographic characteristics and the perceived value of 150 professional extension competencies in the extension personnel's current positions. The competencies were classified within nine categories: administration, program planning, program execution, teaching, communication, understanding human behavior, maintaining professionalism, evaluation, and youth.

Findings. The findings showed no substantial differences in the perceptions of the professional extension competency categories when examined by individuals' position, area of responsibility, experience, age, sex, educational level attained, and level of development inputs. Program planning, program execution, teaching, and evaluation competencies were consistently perceived as being of strong "moderate" value to the extension staff. Communication and maintaining profesionalism competencies were viewed as having "low" value in the respondents' current positions. Administration competencies were rated higher, although not substantially higher, by administrative and supervisory staff. Because of its infancy as a program and by the nature of its delivery to the field, 4-S was consistently perceived as having a "low" value among all staff.

Information. For additional information, contact: Glen W. Easter, Assistant Professor of Agriculture, Graceland College, Lamoni, Iowa 50140 or Ed Yoder, Department of Agricultural and Extension Education, The Pennsylvania State University, University Park, PA 16802.

## PENNSYLVANIA

MATSEBULA, Sebenzile P.J. "Guidelines to Identify Priorities in Agricultural Research in Production Farming for the Small Farmer in Swaziland." Thesis, Master of Science, 1984, The Pennsylvania State University, University Park.

Purpose. The objective of this study was to develop guidelines that could be used to identify priorities for agricultural research in production farming for the small farmer in Swaziland.

Method. Utilizing the Delphi Technique, a panel of experts familiar with the current agricultural research situation in Swaziland were surveyed. The panel members responded to a series of three questionnaires, the first designed to generate a list of guidelines, the second, to clarify and rank the factors generated, and the third, to allow for further, more specific refinement of the guidelines and their relative importance.

Findings. Sixty-two factors were identified from Questionnaire One and rated on a scale of one to nine by the panel. Mean scores for the ratings were computed in order to determine the importance of each factor, and all 62 factors had above average importance. Standard deviations were also computed to determine the degree of consensus among panel members.

Since some of the original 62 factors generated by the first questionnaire were not directly applicable to the aims of the study, and others overlapped in context, the list was reduced to 29 factors which the panel members were asked to rate again on Questionnaire Three. For purposes of data analysis, these 29 factors were then grouped into four major categories: (1) research policy, (2) agricultural production process, (3) research feasibility, and (4) farmer feasibility. The means of the four categories were calculated and revealed the categories titled "agricultural production process" and "research feasibility" were the major categories to be considered when setting guidelines for identifying agricultural research priorities. The categories titled "farmer feasibility" and "research policy" had lower mean scores, which showed that they were considered less important; however, these categories were not significantly less important, than the other two categories. The values of standard deviation for factors in all four categories showed an "average consensus" among respondents.

Information. For additional information, contact: Jim Mortensen, Department of Agricultural and Extension Education, The Pennsylvania State University, University Park, PA 16802, Telephone: (814) 865-7521.

NGULUBE, Junior J. "Procedures for Changing Farmers' Attitudes Toward Soil Conservation in Commercial Farming Areas in Zimbabwe: A Historical Case Study." Paper, Master of Agriculture, 1985, The Pennsylvania State University, University Park.

Purpose. The purpose of this study was to examine the existing top-down extension model (in view of its limited success) to determine if it can be modified or replaced with an alternative model better suited for use in the Communal Farming Areas (CFAs) of Zimbabwe.

Method. The study was a historic case study. The existing top-down extension model was critiqued on the basis of literature and a modified Delphi technique involving nine Zimbabwean Extension Agents currently studying in the U.S.A. Traditional farming and knowledge systems and the traditional communication model were also examined.

Findings. Based on the findings, a proposed extension model was developed and critiqued by a panel of experts. The panel of experts consisted of four American professionals with some international experience and/or extensive knowledge of agricultural extension. There was congruence between findings from literature and the Delphi study. The concept of conservation was not found to be new to CFA farmers. They possess a lot of knowledge about their environment and have their own communication patterns.

The top-down model's major drawback was found to be its lack of feedback from farmers to assist decision making at the top. There is also a problem of heterophilly between extension agents and the farmers. The model was found to be at variance with the current development paradigm of self-development. The top-down model promotes dependency on the part of farmers by making decisions for them. Ideas for extension programs originate outside the CFAs and are based mostly on non-site specific blanket recommendations. The problem solving, learning/teaching model was proposed as a modification to the top-down extension model. This model was based on two-way communication (dialogue) between the farmer and extension agent in finding solutions to mutually pre-identified problems. The model sought to minimize the weaknesses of the top-down extension model while building on its strengths.

Information. For additional information, contact: M. Joy Cantrell, Department of Agricultural and Extension Education, The Pennsylvania State University, University Park, PA 16802, Telephone: (814) 863-0387.

## PENNSYLVANIA

ONGONDO, Wycliffe N. "The Professional Competencies Needed by Intermediate Agricultural Extension Personnel in the Kenya Agricultural Extension Service." Thesis, Doctor of Philosophy, 1984, The Pennsylvania State University, University Park.

*Purpose*. The study's major purpose was to describe and compare the perceptions of Technical Officers, District Agricultural Officers, and Trainers regarding the professional competencies needed by intermediate agricultural extension personnel in the Kenya Agricultural Extension Service. A secondary purpose was to examine the relationships between selected demographic characteristics and the perceptions of the respondents regarding the importance of the professional competencies.

*Method*. The sample consisted of Technical Officers, District Agricultural Officers, and Trainers in Kenya. A questionnaire was developed to collect data concerning the respondents' demographic characteristics and their perceptions of the professional competencies in the areas of administration, program planning, program execution, teaching, communication, understanding human behavior, maintaining professionalism, evaluation, and 4-K Youth. The questionnaire was mailed to a random sample of 200 Technical Officers, 30 District Agricultural Officers, and 120 Trainers after it had been validated and pilot-tested.

*Findings*. The three groups of respondents indicated that 108 of the 111 professional competencies were of high importance in the operation of a successful agricultural extension program. The analysis of variance revealed that the three groups of respondents rated the importance of 17 professional competencies significantly different.

It was found that the area of responsibility of the respondents made a significant difference in the ratings in the program execution and the teaching competency categories. Also, the community where reared made a significant difference in rating the importance of the professional competencies in maintaining professionalism competency category. Lastly, the respondents who had more years as members of 4-K Youth clubs rated the professional competencies in 4-K Youth competency category higher in importance than those who had less years in 4-K Youth clubs.

*Information*. For additional information, contact: Wycliffe Ongondo, Department of Agricultural and Extension Education, Egerton College, Njoro, Kenya or Jim Mortensen, Department of Agricultural and Extension Education, The Pennsylvania State University, University Park, PA 16802, Telephone: (814) 863-0443.

WICKRAMASURIYA, Heshan V.A. "The Development of a Manual for Training Rural Development Leaders in Sri Lanka." Paper, Master of Education, 1983, The Pennsylvania State University, University Park.

Purpose. The objective of this study was to develop a manual that could be used by trainers at Rural Development Training Centers for the training of village level leaders of the Rural Development Societies in Sri Lanka. The specific objectives of the study were to develop a manual that would meet the following goals: (1) increase the understanding of rural development as it pertains to villages; (2) motivate R.D.S. leaders to increase the quality and the number of a society's activities; (3) enable a greater understanding of the advantages of cooperation; (4) increase the leaders' skills in meeting management; (5) increase the leaders' skills in assessing village needs; (6) increase the leaders' skills in the planning and evaluating of village programmes; and (7) increase the leaders' understanding of the power structure and their ability to work with it.

Method. Based on an extensive review of the literature, personal experience, and recommendations of the Master's Committee, a manual was developed for use in the training of village level, voluntary, rural development leaders in Sri Lanka.

Findings. The seven sections in the manual pertain to; concepts of development, motivation of leaders, need for cooperation, meeting management, needs assessment, programme planning and evaluation including book-keeping, and concepts related to understanding the power structure. The procedures recommended emphasize cooperation in order to increase participation and the effectiveness of programmes.

The manual was developed as a teaching aid to be used at short-term training courses by rural development training officers. Detailed teaching strategies were suggested for each section. These strategies included discussions, simulated situations, practical exercises, and games with an emphasis on active trainee participation.

Information. For additional information, contact: Heshan Wickramasuriya, Department of Agricultural Economics and Extension, University of Peradeniya, Sri Lanka or Ed Yoder, Department of Agricultural and Extension Education, The Pennsylvania State University, University Park, PA 16802, Telephone: (814) 863-0443.

WICKRAMASURIYA, Heshan V.A. "The Identification of Focal Individuals and the Analysis of Communication Networks in Four Sri Lankan Villages." Thesis, Doctor of Philosophy, 1985, The Pennsylvania State University, University Park.

Purpose. The study evaluated the efficiency of seven methods of selecting communication focal individuals (FIs), ascertained the degree of common focal individuals and common communication links, and explored the effect of gender on rural women's contacts.

Method. The study was conducted in four types of villages in Sri Lanka. Two were new villages within the major Mahaweli settlement scheme. In one the settlers originated from one original village, and in the other new village (NDV) settlers originated from different original villages. Two were old villages, one within the Mahaweli scheme, and the other not. All house holdheads were interviewed. Women in one village were interviewed.

Findings. The methods compared for identifying focal individuals were: the Contact Farmer method (appointed by extension agents): the Turn-Out Leader method (elected by farmers); the village leaders and government officials method (identified by selected village leaders and local government officials); 10 percent, 20 percent, and 30 percent random sample methods; and the snow-ball sample method. Among these methods the presently used Contact Farmer method was the least effective for identifying focal individuals. The village leader and government official method was the most effective and was recommended for future use. The Turn-Out Leader method was the second most effective in the older villages. No differences were seen among the results for the four sampling methods.

To determine the occurrence of common FIs and links, data on communication for simple agriculture, complex agriculture, financial services, community development, and general friendships were gathered. To determine multiplexity, proportion (PROP) -- or the number of common contacts (NCOM) divided by the maximum number of contacts possible -- was used, the rationale being that the correlation between NCOM and the number of contacts (CON) was very high. Multiplexity was highest in NDV.

Information. For additional information, contact: Heshan Wickramasuriya, Department of Agricultural Economics and Extension, University of Peradeniya, Peradeniya, Sri Lanka or Ed Yoder, Department of Agricultural and Extension Education, The Pennsylvania State University, University Park, PA 16802, Telephone: (814) 863-0443.

BKARI, M. S. "Guidelines for Land Distribution in Saudi Arabia." Report, Master of Science, 1985, Utah State University, Logan, Utah.

Purpose. This paper reviews the Barren Land Distribution Law of 1968 and discusses how the government of Saudi Arabia initiated this law.

Methods and Findings. Three major objectives are involved in this study. First, identifying the general characteristics of the Saudi Arabia Land Distribution Law of 1968; to examine the reasons for the creation of this law and to analyze its advantages and disadvantages. Second, to identify systems of land distribution and techniques in other less-developed countries that result in increased food production. And third, to describe how to apply the findings of this study to the land area and conditions in Saudi Arabia.

Information. For additional information, contact: Department of Agricultural Education, Utah State University, Logan, Utah 84322-4805, Telephone: (801) 750-2230.

CALDERON, J. "A University Curriculum for the Academic Development of Adult Educators Working to Improve Bolivian Agriculture." Report, Master of Science, 1984, Utah State University, Logan, Utah.

Purpose. The purpose of this study was to develop an educational model for people in governmental agencies and the private sector. This curriculum model was needed to provide training for support services personnel in resource management and food production. The specific objective of this study was to develop a university curriculum which will prepare graduates to guide and direct planned change in the Bolivian agrarian sector for solving problems of poverty, malnutrition, and low levels of food production.

Methods. This paper is a library study using existing documents and publications.

Findings. It suggests that social change developed through an educational model can be spread to all socio-economic levels in the rural sector, and the university system is a logical place to start the change process by implementation of a new curriculum in Rural Development. It is recommended that a strong relationship should be created between the University System and the Extension Service. Continuous feedback would be necessary to help assure that the curriculum has the proper focus and that modifications are made as needed. In-service training workshops would provide an excellent opportunity for Extension personnel and university educators to exchange ideas, while at the same time serving as a refresher course for the Extension workers. The performance of all Extension personnel should be evaluated annually and recommendations for improving their performance should be made.

Information. For additional information, contact: Department of Agricultural Education, Utah State University, Logan, Utah 84322-4805, Telephone: (801) 750-2230

HOQ, Amena A. "Development of a 4-H Type Leader Training Model for Nonformal Education in Bangladesh." Special Problem, Master of Adult and Continuing Education, 1984, Washington State University, Pullman.

Purpose. The purpose of the study was to develop a model based on the principles of 4-H and other nonformal education programs to train leaders for implementing nonformal education programs in Bangladesh.

To fulfill this purpose five objectives were developed. These were: (1) identify and describe the present socio-economic conditions of Bangladesh. (2) Identify and describe the general conditions and characteristics of existing literacy programs of Bangladesh. (3) Describe literacy programs and approaches in literacy education of the developing countries. (4) Identify and describe the basic 4-H nonformal approach and program development principles, concepts and models upon which to develop a leader training model for nonformal literacy education in Bangladesh. (5) Develop a comprehensive leader training model for nonformal functional literacy education in Bangladesh.

Method. An extensive review of literature and consultations with subject-matter specialists were conducted at Washington State University.

Findings. The model was developed following the principles of relevant literature, and the recommendation of the specialists. There are ten basic elements in the model. These are (1) Problem Identification (2) Organization (3) Determination of Training needs (4) Characteristics of Leaders (5) Influence of the Community (6) Viewpoints of the Subject-matter Specialists (7) Establishment of Objectives (8) Guidelines for Selection of Leaders (9) Training Procedures (10) Evaluation of Training and the Model.

Tyler's suggested sources of information, Nadler's mode of developing job standards and ascertaining needs and UNESCO's defining priorities were utilized as the basis for determining needs, establishing objectives and developing the model. The training procedure was patterned according to Kemp's teaching-learning method and Paulo Freire's dialogue through operational workshop method. Formative and summative evaluation plans were developed.

Training of personnel through this comprehensive model will provide qualified motivators for efficient propagation of nonformal education programs in Bangladesh.

Information. For additional information, contact: Master of Adult and Continuing Education program, Washington State University, Pullman, Washington, 99164-6236. Telephone: (509) 335-2998.

## WEST VIRGINIA

REKSOHADIPRODJO, Fawzia S. "Problems Perceived by Field Extension Workers in Conducting Training and Visit System in South Sulawesi, Indonesia." Master of Science Thesis, 1984, West Virginia University, Morgantown.

Purpose. Objective of this study was to identify Field Extension Workers' (FEWs) problems in conducting extension activities through the Training and Visit (T&V) System in South Sulawesi, Indonesia.

Method. A questionnaire was desigend to obtain information specifically related to objectives of the study. All FEWs in five randomly selected districts of South Sulawesi were asked to complete the questionnaire. A 71.5 percent response was obtained.

Findings. Respondents considered the organizational structure of the Rural Extension Center (REC) and the administrative system between the REC and District Sub-Sectorial Services as helpful in carrying out their duties. They also indicated that the formal work relationship among extension personnel and between the REC and agricultural agencies at district levels were not problems in performance of extension duties. Teaching facilities and reading materials were considered to be adequate.

FEWs questioned the adequacy of formal work relationships between the RECs and District Non-Food Crops Services. They also indicated concern regarding adequacy of non-food crops theory and practical training taught in training sessions. FEWs were satisfied with trainers' knowledge and skills in agriculture and in their teaching methodology.

Information. For additional information, contact: Dr. Layle D. Lawrence, Agricultural Education, 2056 A.S., West Virginia University, Morgantown, WV 26506-6108, Telephone: (304)293-3431.

# WEST VIRGINIA

SAMARASINGHE, S. H. M. Gamini, "Effectiveness of Visits to Farmers' Groups Under the Training and Visit System of Extension in Sri Lanka as Perceived by Village Extension Workers." Master of Science Thesis, 1985, West Virginia University, Morgantown.

Purpose. This study was designed to evaluate the effectiveness of visits to farmers' groups as perceived by Village Extension Workers (VEWs) under the Training and Visit (T&V) System in Sri Lanka.

Method. Data for the study were obtained through administration of questionnaires to all VEWs in the four randomly selected districts in the Dry and Intermediate zones of Sri Lanka. A 62.2 percent response rate was obtained.

Findings. Information derived from the study reveals that VEWs realize the importance of group approach to achieve their extension goals, and they encourage farmers to develop group action among farmers. VEWs are somewhat dissatisfied with the farmers' participation and performance in group activities. VEWs strongly believe that frequent and scheduled visits to farmers' groups help them to identify farmers' needs and field problems and to develop close relationships between farmers and VEW. VEWs also believe that they provide effective solutions to farmers' technical problems and that their visits to farmers' groups influence a change in behavior and attitude of the farmer. VEWs are not satisfied with involvement of farmers in extension program development.

Information. For additional information, contact: Dr. Layle D. Lawrence, Agricultural Education, 2056 A.S., West Virginia University, Morgantown, WV 26506-6108, Telephone: (304)293-3431.

UMAR, Mohammad. "The Effectiveness of Radio Agricultural Programs in Promoting Development as Perceived by Progressive Farmers in the Northern Division of Fiji Islands." Master of Science Thesis, 1983, West Virginia University, Morgantown.

Purpose. The major purpose of this study was to determine the effectiveness of 'Radio Agricultural Programs' in promoting development as perceived by progressive farmers in the Northern Division of Fiji Islands.

Method. Following preparation and testing of survey forms, each of the eighty extension officers in the Northern Division of Fiji Islands was asked to select five progressive farmers within the locality, interview them, and record the responses on the survey form. Of the 400 survey forms sent for data collection, 230 forms (57.5%) were completed and returned by mail to the researcher for analysis.

Findings. Findings suggest that a large number of progressive farmers in the Northern Division of Fiji Islands own radios, receive clear reception and spend many hours listening to radio during the week. Farmers listen to most radio programs broadcast by Radio Fiji including the 'Farmers Programs.' Most farmers expressed satisfaction with the air time allocated to 'Farmers Programs' and the times during the week when this program is broadcast in the three major languages. Some dissatisfaction was noted regarding the quality of 'Farmers Programs,' particularly by Indian farmers. Extension workers were considered the most influential source of information in the adoption of new farming techniques, followed by radio and neighbors. Except for 'Music and songs,' all other aspects of 'Farmers Programs' were regarded as very useful.

Information. For additional information, contact: Dr. Layle D. Lawrence, Agricultural Education, 2056 A.S., West Virginia University, Morgantown, WV 26506-6108, Telephone: (304)293-3431.

# PERSONNEL/ STAFF DEVELOPMENT

TANKERSLEY, Marilee M. "Career Appearance of Male Agents in the Alabama Cooperative Extension Service: Significance for the Agents, Their Supervisors, and Clientele." Thesis, Master of Science, 1985, Auburn University, Auburn, Alabama.

Purpose. The study was undertaken to determine the perceptions of the dress and appearance of male county agents in the Alabama Cooperative Extension Service (ACES) held by the agents, their administrative supervisors, and Extension clientele; and to compare them, one to another. The study also attempted to determine the perceived influence, if any, of the appearance of agents on their career advancement, program, success, and general public confidence in ACES.

Method. Separate mail questionnaires were used to collect information from the three groups of subjects: 142 agents, 75 supervisors, and 183 clientele from 18 representative counties in Alabama. The survey questions identified respondents' opinions of the dress and appearance of agents and included a section to identify most appropriate dress practices for varied occupational activities. Statistical procedures used were response frequencies, percentages, and chi-square tests.

Findings. Results revealed that, although all groups viewed the dress and appearance of agents as being important, significant differences were found for the perceived norms of appearance held for the agents by the agents themselves, their supervisors, and their clientele. Agents and supervisors were found to hold the most similar expectations, while clientele and supervisors were most diverse. Supervisors and agents favored the more formal options of dress with a tie for the majority of the occupational activities, while clientele more frequently selected casual and informal attire. The responses of agents and supervisors revealed that they agreed that the dress of agents is important to career advancement. Similarly, agents, supervisors, and clientele indicated an acceptance of the influence of dress and grooming for success of an agent's programs and the public image of ACES. However, supervisors had the strongest feelings about the importance of these relationships.

The agents had a strong feeling for the importance and appropriateness of their dress and appearance, which was supported by their supervisors and clientele. With the value placed on the career appearance of agents, it was concluded that agents should use their clothing selection and personal grooming habits to influence and perhaps enhance their relationships with clientele and supervisors.

Information. Marilee M. Tankersley, County Agent, Elmore County, P. O. Box 200, Wetumpka AL 36092, Telephone (205) 567-6301.

LAW, Dale A. "Extension Advisors' Perceptions of Their Jobs and Their Need for Additional Training in Relation to Duties and Demographic Characteristics." Thesis, Doctor of Education, 1985, University of Illinois, Urbana-Champaign.

Purpose. The primary purpose for this study was to provide a basis for developing effective in-service education programs in each of 14 duties for county advisors in the Illinois Cooperative Extension Service (ICES). A secondary purpose for this study was to compare response data between selected categories of advisors as follows: (a) position title; (b) type of undergraduate degree; (c) gender; (d) years of employment with ICES; and (e) level of education.

Method. The population included in this study consisted of county Extension advisors who had completed one year or more of employment with ICES as of June 1. The sample was self-selected based on who returned a completed questionnaire.

The research instrument was a two-part questionnaire mailed to all Extension advisors in Illinois. It was designed to be an assessment of needs of in-service programming. Final usable responses were obtained from 319 (85.29%) respondents. Statistical techniques used in analyzing the data were canonical discriminant analysis (including analysis of variance), means, medians, ranges, percentages, and frequencies.

Findings. (1) A very high majority of advisors considered the 14 job duties to be a part of their work responsibility and requested specific in-service programs in each of the duties. (2) In-service education was the primary source of current competence to perform all duties. Undergraduate programs were the second most important source of current competence. (3) A majority of advisors believed that a new ICES employee should already be able to perform 11 of the 14 duties at the time of original employment. (4) Advisors as a whole are highly confident in their ability to perform 8 of the 14 duties, fairly confident in performing 5 of the duties, and not very confident about the other duty. (5) Advisors indicated the greatest need for additional training, and that they had the least amount of confidence in their ability to perform, the duty concerning evaluating program effectiveness. (6) Advisors perceive the ability to perform each of the 14 duties as being critical to their overall success as an adviser. (7) There were significant differences between selected categories of advisors with regard to criticalness and need for additional training for many of the 14 duties.

Information. For additional information, contact: Dale A. Law, Assistant Head and Specialist, Vocational Agriculture Service, College of Agriculture, University of Illinois, 1401 S. Maryland Drive, Urbana, Illinois 61801, Telephone: (217) 333-3870.

WELLS, Joseph R. "Choice of Extension Education Curricula as Determined by Selected Cooperative Extension Service Agents." Masters Study, 1985, Southern Illinois University, Carbondale, Illinois.

Purpose. The problem addressed by this research was the following: What teaching methods and other course content items do experienced extension agents consider to be most important for students to obtain during preservice educational courses, experience or programs?

Method. A mailed questionnaire was selected as the most appropriate instrument to obtain the survey information. The population consisted of forty-five experienced agents in each of the three program areas from forty-four states in the United States. The total population consisted of 135 county or region level agents of the Cooperative Extension Service. Section one of the questionnaire was concerned with the personal profile of the sample population. The second section allowed the extension agents to rate the importance of course curriculum and to rate the importance of various components of a possible extension education course curriculum and to rate the importance of learning most of the topics through internship positions. The data of the first section of the questionnaire were compiled and summarized. The data of the second section were a ranking of response means and Spearman's rank correlation of course and internship importance level means.

Findings. The agents' responses indicated Cooperative Extension Service History and Cooperative Extension Service Organization were more suited for instruction within a college course setting. The agents responses also indicated Extension Reporting Methods, Committee Involvement, and Extension Meetings were more appropriate for learning within an internship program. Program Planning and Maintenance and Program Evaluation were found in the top three rank positions for course importance. Media Presentation and Time Management Training were placed in the top three rank positions by responses from all three program areas.

Information. For additional information, contact: Dr. James Legacy, Chair, Agricultural Education and Mechanization, Southern Illinois University at Carbondale, Carbondale, Illinois 62901, Telephone: (618) 536-7733.

HALL-JOHNSEN, Karen J. "The Relationship Between Readiness for, and Involvement in Self-Directed Learning." Ph.D. Dissertation, 1985, Iowa State University, Ames.

Purpose. This research was primarily a prediction study which examined the relationship between readiness for self-directed learning and involvement in self-directed learning.

Method. The Adult Learning Projects Telephone Interview Schedule and the Self-Directed Learning Readiness Scale (SDLRS), an instrument which assesses the degree to which an individual is prepared to assume responsibility for his or her own learning, was administered to a random sample of 65 Iowa State University Cooperative Extension Service professional staff. Demographic variables were examined using a one-way analysis of variance to identify whether differences existed among groups with respect to readiness scores and involvement in learning projects. Linear regression analysis was used to identify whether readiness (SDLRS) is a predictor of extent of involvement in adult learning projects. Multiple stepwise regression was utilized to identify which personal readiness factor(s) is(are) the best predictors of the number of self-planned projects and the time invested on them.

Findings. Findings indicate there is a positive, predictive relationship between readiness and the number of self-planned projects conducted, as well as the amount of time spent on them. Self-concept as an effective, independent learner was identified as the personal readiness factor that best predicted the number of self-planned projects and the time spent on them.

Readiness level for self-directed learning did not differ with respect to gender, full versus part-time employment, program area, level of position, educational level beyond a bachelor's degree, or job tenure. However, extent of involvement in self-planned projects was found to differ with respect to tenure and level of position.

Findings suggest that the SDLRS can predict involvement in self-planned learning. However, its predictive ability is limited due to the large portion of unexplained variance in the number of self-planned projects and time spent on these projects. Recommendations for further research were identified.

Information. Contact: Karen Hall-Johnsen; Assistant State Leader, 4-H and Youth Programs; 33 Curtiss; Iowa State University; Ames, IA 50011. Telephone: (515)294-1017.

WEIGEL, Randy R. "A Comparison of Assistance Used by Field-Dependent and Field-Independent Adults Engaged in Self-Planned Learning." Dissertation, Doctor of Philosophy, 1985, Iowa State University, Ames.

Purpose. The purpose was to ascertain if the cognitive style of adult learners influence the type of assistance used and the importance of that assistance, when engaged in self-planned learning projects. A secondary objective was to identify when assistance is most helpful in the learning process; in choosing, in planning, or in implementing self-planned learning projects.

Method. Fifty-seven adult learners were interviewed about the extent of their self-planned learning efforts. They were given the Embedded Figures Test, an instrument identifying tendencies toward field-dependent or field-independent cognitive style. They were also asked to complete three, researcher designed checklists examining the importance of assistance to self-planned learning. Checklist one listed 20 sources of assistance learners use in self-planned learning. Ten sources of assistance were categorized as human sources (involving interaction with people) and ten were categorized as nonhuman (interaction with materials or inanimate objects). Checklists two and three studied the types of assistance adults receive from human and nonhuman resources during their learning efforts. Independent T-tests and multiple regression were included in the data analysis.

Findings. Field-dependent learners did report that nonhuman sources of assistance were more important to their learning than was reported by field-independent learners. The importance of nonhuman sources of assistance was found to be a predictor of reported satisfaction with self-planned learning. No significant difference between learners was found on the importance of human or nonhuman assistance during the process of choosing, planning, or implementing self-planned learning.

A post-hoc analysis indicated that both types of learners found nonhuman resources more helpful in planning their learning efforts and human resources were more helpful in implementing self-planned learning projects.

Information. For additional information, contact: Randy R. Weigel, Ph.D., Extension Specialist, Human Development and Family Life, 213 Child Development, Iowa State University, Ames, Iowa 50011, Telephone: (515) 294-8754.

SMALLEY, Jared M. "Perceptions of Nine Change Agent Roles and Related Work Variables by County Extension Agents in the Minnesota Agricultural Extension Service -- 1985." Doctor of Education Dissertation, 1985, Louisiana State University, Baton Rouge.

Purpose. The major focus of this study was on the self-expectations of Minnesota County Extension agents as they carry out nine change agent roles in their educational work. Impetus for the study came from a 1984 report that indicated 70.5 percent of these agents felt emotional strain due to "expect too much of self".

Method. Data were collected regarding the nine roles and six work-related variables by mail questionnaire. A total of 230 usable responses were received from the 248 agents on active duty during May 1985.

Findings. The major findings of the study were 1) the most positive aspects of agent self-expectations come from carrying out the roles of teaching problem solving skills, good program development, working with volunteers, and remaining flexible to meet the needs of Extension clientele; 2) the most negative aspects of agent self-expectations come from attempting to deal with issue education and accessing the total university; while perceptions regarding alternative delivery systems tend to remain ambiguous; 3) agents' self-expectations regarding self-development and risk-taking can be either positive or negative as a personal motivator depending upon past experiences in the Extension organization; 4) agent strain and reports of "expect too much of self" can be anticipated when there is a combination of high levels of commitment to the organization, involvement with their jobs, internal work motivation, and feelings of intrinsic reward from task accomplishment; 5) lack of feedback on goal effort may be contributing to the feelings of strain associated with agent self-expectations, despite adequate participation in goal setting.

It was concluded that administrators should consider the high level of self-expectations as a positive indicator of dedication to the Extension organization, and rather than focus on the strain, there is need to give leadership that clarifies the mission and goals with each agent. Concerns and pressures regarding accountability could be reduced by improved communication and counseling techniques between supervisor and agent.

Information. For additional information, contact: Jared M. Smalley, Area Extension Agent, CNRD - NW District, Agricultural Extension Service, University of Minnesota, Agricultural Research Center, Crookston, Minnesota 56716, Telephone: 218/281-6510, ext. 490.

COOPER, Elmer L. and BAZLEY, M. C. "A Study of the Curriculum and a Follow-Up of Graduates of the Agricultural Education Program at the University of Maryland, College Park, 1949-1982." Staff Study, Department of Agricultural and Extension Education, 1985, University of Maryland, College Park.

Purpose. The purpose of this study was to determine the quality and relevance of the curriculum in agricultural education at the University of Maryland, College Park, as perceived by graduates who completed student teaching between 1949 and 1982 inclusive.

Method. A mailed questionnaire was used to obtain demographic data, employment data, education experiences and perceptions regarding their college program in agricultural education.

Findings. The respondents called for greater emphasis on courses with agricultural engineering, economics and resource management skills. To a lesser extent, additional emphasis on animal science, horticulture and speech was indicated. Apparently, skills in basic education and agricultural education are adequately covered in the existing program.

Some additional findings were: (1) High school FFA Experiences and personal interest in agriculture were the most influential factors in choosing agricultural education as their college major; (2) Fifty-four percent of the respondents held the B.S. as their highest degree, while 33 percent held the M.S. and 8 percent held a Doctorate; (3) Eighty-six percent were employed full time; (4) Fifty-four percent earned over $25,000 per year; (5) Eighty-seven percent of the graduates recently employed were satisfied with their employment; (6) Fifty-three percent listed teaching vocational agriculture as their first employment after graduation, followed by 14 percent for agriculture business and service, 7 percent Cooperative Extension Service, 6 percent agricultural production and 5 percent military.

It was concluded that the University and those majoring in agricultural education would have several choices in correcting skill deficiencies of B.S. graduates. These include: (1) Increase the learning requirements in the technical courses; (2) Require additional credits in the B.S. program; (3) Require students to obtain more skills through occupational experience; (4) Have prospective students take courses in technical institutions; (5) Develop certain technical skills after acquiring a B.S. degree; (6) Require teachers to do an internship where technical skills may be learned.

Information. For additional information, contact: Dr. Elmer L. Cooper, Associate Professor, Agricultural and Extension Education, University of Maryland, College Park, MD 30742, Telephone: (301) 454-3738.

MOHAMED, Abdullahi A. "A Study of the Extension Training Needed as Perceived by Former Extension Professionals Currently Studying in the United States." Master of Science Research Paper, 1984, Michigan State University, East Lansing.

Purpose. The purpose of the study was to provide information about the educational needs of the Extension staff at the regional and district level so as to increase the quality of service provided by the Extension service in Somalia.

The major objective of the study was to determine the inservice training needed by Extension professionals as perceived by former Extension officers and coordinators, in order to provide improved assistance to Extension's clientele. Three competency areas identified for the study were: (1) program planning, (2) program implementation, (3) program evaluation.

Method. A survey instrument was used to collect information about the training needed as perceived by all former Somali Extension technical staff who were studying in the United States. Data were analyzed using frequency distribution. A Likert-type scale, ranging from low to very high, was used in the study.

Findings. When former Extension coordinators and officers were asked to identify the training needed to improve competency in the three areas, there was a general agreement that there was a high need for the Extension professionals to possess additional competency in all of the three competency areas, to increase the quality of service provided by the Extension service to its clientele.

The frequency distribution used in this study, ranging from a low which was represented by (1) to a very high represented by (4), showed a group mean value of 3.64 in program planning, 3.65 in program implementation, and 3.69 in program evaluation. Therefore, it was concluded that there was a high need to improve competency in all of the three competency areas identified in the study.

Information. For additional information, contact: Department of Agricultural and Extension Education, Michigan State University, East Lansing, Michigan 48824-1039, Telephone: (517) 355-6580.

OLSTROM, Einer G. and MILLER, Howard L. "Plus Two Score: The Cooperative Extension Service in Michigan 1940 to 1980." Historical Study of the Cooperative Extension Service in Michigan, 1984. Michigan State University, East Lansing.

Purpose. The purpose was to provide summaries of Michigan Cooperative Extension Service history from 1940 to 1980. A second object was to document personnel changes within the Michigan system from 1912 to 1980.

Method. A number of methods were utilized to collect and verify the information for this study. Information for the study were collected from the following sources: (a) personal files and recollection of the authors; (b) Extension News (monthly information about Extension) and the Extension Communicator; (c) MSU library and archives; (d) MSU Information Services; and (e) other reports regarding the Michigan Cooperative Extension Service. Information verification consisted of careful review by Michigan State University, College of Agriculture and Natural Resources Department Chairpersons, key County Extension office personnel, and individuals who retired from the Michigan Cooperative Extension Service.

Findings. The results provide a continuous historical perspective relative to the Michigan Cooperative Extension Service. The first historical report was prepared by Karl McDonel titled "History of Cooperative Extension Work in Michigan, 1914-1939." Plus Two Score chronicles the highlights of the Extension Service in Michigan through four decades. Some of the contributions of the 2,000 Extension employees and thousand of volunteers are depicted. The report provides the following with a particular emphasis on National activities and Extension:
(a) Prologue to Four Decades of Extension; (b) Extension in a World at War--the 1940's; (c) The Centennial Years: 1950-1959;
(d) Troubled Times: from Stability to Explosion--1960's;
(e) the 1970's--Continuing Growth in Crisis and Challenge;
(f) Chronology of Extension; (g) Directors; (h) all Personnel;
(i) Roster of Extension.

Information. For additional information, contact: Department of Agricultural and Extension Education, Michigan State University, East Lansing, Michigan 48824-1039, Telephone: (517) 355-6580.

PAAUWE, Leonard W. "Self Administered Job Preview Exercises." Thesis, Master of Science, 1986, Michigan State University, East Lansing.

Purpose. The purpose of the study was to develop an effective self-directed learning exercise to assist new staff to prepare to assume roles of a county extension agent.

Method. To provide new employees with accurate information and help them adjust expectations as Self Administered Job Preview Exercise (SAJPE) was developed and used to supplement standard orientations. Following the employee completion of the SAJPE a feedback session with the researcher was conducted to record and measure changes in expectations as perceived by the new employee. The procedure was piloted on two individuals and with minor changes used as part of the standard orientation for ten subjects. Subjects participating in the study were newly employed Extension agents without prior experience in Cooperative Extension. The procedure was conducted during their first stage of orientation and after being hired.

Findings. The SAJPE was able to alter, but not basically change, expectation held by new employees. The altered expectations were in nearly all cases a result of additional, not conflicting information. The procedure did present new employees with information at a critical time and allowed for alignment of personal expectations with the reality represented in the model.

Information. For additional information, contact: Leonard W. Paauwe, Michigan State University, Department of Agricultural and Extension Education, Michigan State University, East Lansing, Michigan 48824-1039, Telephone: (517) 355-6580.

CHANDRAPATYA, Suraphol. "The Interrelationships Between Leadership Style, Locus of Control, and Other Selected Characteristics of County Extension Leaders Within the Mississippi Cooperative Extension Service." Dissertation, Doctor of Education, 1984, Mississippi State University, Mississippi State.

Purpose. To identify the self-perceived leadership style of the MCES county leaders in relation to their leadership situation and to determine if any relationships existed between leadership style and locus of control and other selected characteristics including age, race, educational level, tenure as county leader, tenure with MCES, and training in administration.

Method. The respondents in the study were 75 of 80 county leaders within the MCES. A questionnaire measuring leadership style, leader-member relations, and locus of control orientation was mailed to the county leaders. Meanwhile, another questionnaire measuring the task structure and position power of the county leaders was rated by a panel of Extension professionals. The selected characteristics of the county leaders were obtained from September 25 to October 12, 1984.

The statistical procedures used in analyzing data were frequency distributions, measures of central tendency, and correlational and multiple regression techniques. Correlation coefficients below .30 were considered to be of no practical importance.

Findings. The major findings of this study were: (1) Approximately 50% of the MCES county leaders were task-motivated, 39% were relationship-motivated, and the rest were socio-independent; (2) About 43% of the task-motivated leaders had high control of situation and 31% of the relationship-motivated leaders had moderate control. Their leadership styles and situations matched, theoretically making them more effective; (3) More of the county leaders tended to be internally than externally control oriented; (4) Relationships between leadership style and locus of control and between leadership style and other selected characteristics of the county leaders were of no practical importance; (5) Correlations between locus of control and other selected characteristics were of no practical importance; (6) Of the seven independent variables, training in administration and tenure as county leader were the two variables which contributed most to the explanation of leadership style. Age, educational level, and locus of control contributed somewhat less in the explanation of style, and race and tenure with MCES contributed the least.

Information. For additional information, contact: Ronald A. Brown, Professor, Agricultural and Extension Education, Mississippi State University, Drawer AV, Mississippi State, MS 39762, Telephone: (601) 325-3326.

ELLIOTT, Graydon Edward. "A Comparison of Two Instructional Methods for Teaching Microcomputer Competencies to Extension Personnel in Mississippi." Dissertation, Doctor of Education, 1985, Mississippi State University, Mississippi State.

Purpose. The purpose was to determine differences in achievement of microcomputer knowledge on cognitive tests between personnel of the Mississippi Cooperative Extension Service who were taught basic skills by computer assisted instruction, the traditional lecture demonstration method, and combinations of these.

Method. The research involved a quasi-experimental design. The study was made of 146 Extension personnel in four intact groups in inservice workshops. Traditional lecture-demonstration methods were used with the control group. One treatment group received computer assisted instruction (CAI) with a take-home CAI package. Another treatment group received CAI with take-home printed materials. The third treatment group received traditional lecture-demonstration (TLD) instruction with a take-home CAI package.

Three instruments were developed for testing knowledge. These were: pretest, posttest one, and posttest two. Analysis involved descriptive statistics, analysis of covariance, analysis of variance, and correlations.

Findings. No statistically significant difference was found in achievement between groups on posttest one (given immediately after the workshop). A significant difference was found when initial treatment was CAI and follow-up was CAI for one group and TLD for the other. The TLD group scored higher. Findings further indicated that CAI was more effective when followed up with TLD take-home materials. Also, personnel preferred to be taught by the TLD method. Regardless of method of instruction used, individuals with previous microcomputer experience should be taught separately from those without previous experience.

Information. For additional information, contact: Graydon E. Elliott, Computer Applications, Mississippi Cooperative Extension Service, P. O. Box 5405, Mississippi State, MS 39762, Telephone: (601) 325-3226.

LAUGHLIN, Barbara W. "The Relationship of Locus of Control and Other Selected Variables to the Ratings of Job Performance of Extension Home Economics Agents in Mississippi." Dissertation, Doctor of Education, 1984, Mississippi State University, Mississippi State.

Purpose. The purpose was to determine the relationship between Extension home economics agents locus of control and ratings received on the Performance Evaluation Instrument used in Mississippi. From this, an attempt was made to determine which variables would most effectively predict job performance.

Method. An ex post facto design was used. The entire population of 79 Mississippi Extension home economics agents was studied. The instruments used were: (1) the Rotter Internal-External Locus of Control Scale (mailed to the agents to determine a measure of locus of control) and (2) the Performance Evaluation Instrument (PEI) (completed by the district program leaders in home economics during the annual performance review). The independent variables used were: locus of control, level of academic preparation, undergraduate major, race, work experience, and age. This information was obtained from personnel records of the Mississippi Cooperative Extension Service.

Statistical methods included descriptive measures, such as central tendencies, frequency distributions, correlation coefficients, stepwise multiple regression, and general linear models procedures.

Findings. Useable responses were available from 69 of the 79 agents. The best model to predict PEI ratings included the variables of race, locus of control, work experience, and age, and this accounted for only 25% of the variance in PEI ratings. Race alone counted for 15% of the variance. Black home economics agents scored lower on the PEI even after adjusting for age and work experience. This difference may be partially attributable to the educational preparation of Black agents.

Information. For additional information, contact: Department of Agricultural and Extension Education, Mississippi State University, P. O. Drawer AV, Mississippi State, MS 39762, Telephone: (601) 325-3326.

# MISSISSIPPI

LEE, Jasper S. "The Equivalency of Selected Junior College and University Introductory Courses in Agriculture." Staff Study, 1985, Mississippi State University, Mississippi State.

Purpose. The major purpose of the study was to investigate the equivalency of selected agriculture courses taught by faculty in Mississippi public junior colleges and by the faculty in the College of Agriculture and Home Economics at Mississippi State University.

Method. An ex post facto design was used. All senior students in selected agriculture majors (167 individuals) at Mississippi State University during the spring semester, 1985, were surveyed. The instrument used was designed to gather demographic information and information about the courses. Four introductory courses were studied: animal science, plant science, soil science, and agricultural economics. A five-point rating scale was used in assessing attitude. The instrument was submitted to a panel of experts for construct validation and pilot tested with a group of senior agriculture students.

Statistical analysis involved the computation of frequencies, means, standard deviations, and t tests. The t values were used to determine if significant differences existed in the attitudes and grades of students completing the courses.

Findings. The findings are based on 121 useable responses, or a return rate of 72.5%. Of the respondents, 53, or 43.8%, had attended a junior college. The agriculture course most frequently taken at a junior college was introductory plant science. Although there was no significant difference in final grades, students who took plant science at a junior college had significantly more positive attitudes about the course. Students who took the introductory animal science course at MSU had significantly more positive attitudes yet lower grades. Students who took introductory agricultural economics at a junior college had significantly higher grades and more positive attitudes. With the introductory soil science course, students who had taken it at a junior college had significantly higher grades; however, there was no difference in attitude ratings between those who had taken it at a junior college and MSU.

Information. For additional information, contact: Department of Agricultural and Extension Education, Mississippi State University, P. O. Drawer AV, Mississippi State, MS 39762, Telephone: (601) 325-3326.

MITCHELL, David G. "A Study to Determine the Attitudes, Self-Perceived Training Needs, and Experience of Alabama County Extension Agents in the Use of Microcomputers." Masters Thesis, 1985, Mississippi State University, Mississippi State.

Purpose. To determine the attitudes, self-perceived training needs, and experience of Alabama Cooperative Extension service county academic staff in the use of microcomputers.

Method. Data were collected by use of a mail questionnaire consisting of five parts: (1) individual characteristics, (2) training needs and methodology, (3) attitudes toward microcomputers, (4) problems associated with microcomputer use, and (5) utility of microcomputers. The questionnaire was administered to all Alabama Cooperative Extension Service county academic staff, which included county agent-coordinators, agricultural and natural resources agents, home economics agents, and 4-H agents. Data were collected from 269 respondents for a 90.5% return. Statistical procedures used to analyze the data included frequencies, means, percentages, and standard deviations.

Findings. Although the majority of the respondents had not had specific microcomputer training, it was a priority for them. They also believed that training should be voluntary, but that it was the responsibility of the Alabama Cooperative Extension Service to keep them up-to-date with computer technology. Respondents indicated that the preferred training program be in-service workshops without college credit.

Overall, respondents had a favorable attitude toward microcomputers. There was very little difference in attitudes when respondents were grouped by professional Extension position, age, or previous training.

Respondents believed the lack of funding to purchase microcomputers was a major problem associated with their use. A lack of available software was perceived to be another major problem.

The most valuable use of microcomputers as perceived by respondents was to prepare mailing lists. The least valuable use was for programmed instructional use for clientele.

Information. For additional information, contact: Department of Agricultural and Extension Education, Mississippi State University, P. O. Drawer AV, Mississippi State, MS 39762, Telephone: (601) 325-3326.

# MISSISSIPPI

PAIGE, Raygene C. "An Analysis of the Self-Perceived In-Service Training Needs of Mississippi Extension Home Economists." Dissertation, Doctor of Education, 1985, Mississippi State University, Mississippi State.

Purpose. The purpose was to assess the self-perceived training needs of Mississippi Extension home economists in nine general competency areas and to determine if any relationship existed among these training needs and the variables of age, educational level, race, and county population.

Method. The research was descriptive and correlational in nature. The population was comprised of 79 Mississippi Extension home economists. All 79 responded for the study. The instrument used was the McCormick Inventory of Training Needs of County Extension Agents. This instrument was mailed to the population. Data on the independent variables were collected from personnel records of the Mississippi Cooperative Extension Service.

Data analysis involved use of the Statistical Package for the Social Sciences (SPSS) program. Spearman rank-order correlation; Coefficient of Concordance, $W$; frequency distributions; and multiple regression analysis techniques were used.

Findings. Race, age, level of education, and county population were correlated with the overall area rankings and with each of the items on the McCormick Inventory of Training Needs of County Extension Agents. The two top areas of in-service training needs were technology and research. The lowest areas were understanding social systems and the educational process. Variance in self-perceived in-service training needs of Extension home economists in Mississippi cannot be explained by knowledge of race, age, educational level, or county population.

Information. For additional information, contact: Department of Agricultural and Extension Education, Mississippi State University, P. O. Drawer AV, Mississippi State, MS 39762, Telephone: (601) 325-3326.

BUCHANAN, Patricia Jarboe. "Development of an Affirmative Action Inventory." Dissertation, Doctor of Philosophy, 1984, University of Missouri-Columbia.

Purpose. The purpose of this study was to develop an inventory that would reliably measure selected aspects of the perceptions of Cooperative Extension Service personnel toward affirmative action.

Method. The data used for this study were collected from 119 Missouri Extension Service employees. A three-stage set of procedures was undertaken involving: (a) development of an item pool, (b) administration of the items to a sample of the target population, and (c) selection of items through multiple factor analytic techniques.

Findings. An item pool of 43 declarative statements was developed from experience, existing scales, input from Cooperative Extension employees, and state guidelines for affirmative action internal reviews. Statements were judged by a group of Cooperative Extension professionals working in the area of affirmative action. After their revisions, 31 items remained in the inventory. Using data collected from mailing the inventory to Missouri Cooperative Extension employees, an item analysis procedure was conducted that correlated each item with the total score. From the item analysis, 26 items were determined to have a correlation of .20 or higher. These 26 items were subjected to a factor analysis that resulted in 23 items loading .40 or higher. Utilizing the principal components procedure, four rotated factors were generated. All factors in the inventory had coefficient alphas above .75.

From this study, a 23-item inventory with four identifiable factors was developed with sufficient reliability and validity to measure perceptions of Cooperative Extension Service staff toward affirmative action. The four factors in the inventory were labelled Affirmative Action Philosophy, Need for Affirmative Action, Need for Program Modification, and Need for Planning.

Information. For additional information, contact: Dr. Patricia Jarboe Buchanan, Coordinator, Affirmative Action, Cooperative Extension Service, University of Missouri-Columbia, 828 Clark Hall, Columbia, Missouri 65211, Telephone: (314) 882-6805.

BUCHANAN, Walter Thomas. "Self-Concept and Participation Training." Dissertation, Doctor of Philosophy, 1984, University of Missouri-Columbia.

Purpose. The purpose of this study was to ascertain the change in self-concept of professional and technical people, as a result of a nine-hour participation training program.

Method. The data used for this study were collected from professional and technical people employed by Missouri firms. Subjects included employees from nursing, manufacturing, banking, government, and chemical production. The non-equivalent control group design was used. The experimental group was comprised of 134 subjects and the control group included 194. A pre-test and post-test using a semantic differential scale was administered to the subjects. A follow-up response was received from 44 of the experimental group. The response data included matched pre- and post-tests.

Findings. The primary methods of statistical analysis were factor analysis, coefficient alpha, and multivariate analysis of variance followed by a univariate analysis of variance with each dependent variable. Five null hypotheses were tested at the .05 level of significance. The results indicated a significant mean score gain in self-concept between the pre-test and post-test.

The self-concept of professional and technical people can be positively changed as a result of a nine-hour participation training program. This change was maintained by the participants for at least a three-week period after receiving the training. The participants became more aware of their own role and the role of others in group situations.

Information. For additional information, contact: Dr. Tom Buchanan, Business and Industrial Specialist, Cooperative Extension Service, University of Missouri-Columbia, 1806 West 11th Street, Sedalia, Missouri 65301, Telephone: (314) 882-6805.

## MISSOURI

MNYAU, Waziri N. "Orientation, Job Satisfaction, and Job Performance of New Extension Personnel in Missouri." Dissertation, Doctor of Philosophy, 1985, University of Missouri-Columbia.

*Purpose*. The purpose of the study was to investigate orientation, job satisfaction, and job performance of new extension personnel in Missouri.

*Method*. The non-randomized sample consisted of all those personnel who responded and for which data could be obtained. This sample included 86 of 97 new personnel in Missouri with one to four years' experience. Two questionnaires, the *Minnesota Satisfaction Questionnaire* and the *Orientation Program Effectiveness Questionnaire*, were mailed to the subjects. Job performance was obtained by using job performance records.

The resultant data were analyzed by the use of descriptive statistics, correlation analysis, all possible multiple regression, and stepwise multiple regression.

*Findings*. To the extent that the data and findings resulting from the research procedures utilized in this study were valid and reliable, the following conclusions seem warranted: (1) Orientation is more important to employees of an organization, like the cooperative extension service, than has been recognized previously; (2) Those individuals who were highly satisfied, and who rated their orientation program highly and as more important, had high performance ratings; (3) The local office procedures and services could have been covered better during orientation; (4) Higher job satisfaction can lead to higher job performance; (5) Hiring of more mature individuals in the Missouri Cooperative Extension Service may lead to higher job satisfaction and better job performance; and (6) The program is more effective in some subject categories in the Missouri Cooperative Extension Service than others.

*Information*. For additional information, contact: Education Academic Affairs, University of Missouri-Columbia, 109 Hill Hall, Columbia, Missouri 65211, Telephone: (314) 882-8131.

YOUNG, Loyd, Chair--EduCable Study Committee. "Cable Television: A Method for Delivering Information." Committee Report, 1983, University of Nebraska-Lincoln.

Purpose. Cable companies are developing and expanding at a rapid rate in urban communities across the country and throughout Nebraska. These companies are generally one-way broadcast information systems with provisions for local programming to the community on one channel designated for public access. Therefore, it appears logical for the CES to explore the possibility of utilizing cable networks as a method of delivering information to urban audiences.

The purpose of this project was to develop and evaluate a pilot project utilizing cable television as an information dissemination mode for the CES.

Method. Utilization of cable television as an information delivery mode was evaluated by (a) interviewing those who developed and implemented the pilot project, (b) a mail questionnaire sent to potential viewers of a three-program leader training series in 4-H, and (c) a telephone interview with potential viewers of a three-program horticultural series.

Findings. Some of the findings of the study include: 1. Effective utilization of cable as a delivery mode would require cooperation and sharing between counties and additional support services from Extension specialists. 2. There is resistance to developing television programs by some staff. They appear to feel that (a) it is too time consuming, (b) priorities should be in other places, (c) budgets are tight and money is unavailable, and (d) the cable audience is not large enough to justify the expenditure in time. 3. Staff are unprepared educationally to utilize television as an information dissemination mode on a regular basis.

Information. For additional information, contact: Loyd Young, District Director, 211 Mussehl Hall, University of Nebraska-Lincoln 68583-0714, Telephone: (402) 472-3674.

GRIFFIN, Sylvia F. "Methods of Coping with Work Force Role Conflict In Relation to Job Satisfaction of Cooperative Extension Home Economists." Dissertation, Doctor of Education, 1984, Rutgers University, New Brunswick, New Jersey.

Purpose. This exploratory study examined the role behavior of female Extension home economists in response to work force role conflict and analyzed this behavior in relation to job satisfaction. Indigenous to this problem was the development of a scale to measure response to role conflict by type and frequency and demonstrate its use in some preliminary findings.

Method. The scale developed was based on the concept that Extension home economists, in their work force situation, fulfill concurrently the multiple roles of educator, administrator, field worker, media specialist and home economics professional, which causes role conflict. Two multiple choice questions were developed for each of ten typical role conflict situations and the possible responses intervened at three levels of role conflict resolution. The three levels were Type I, structural role redefinition; Type II, personal role redefinition; and Type III, reactive role behavior. The 29 New Jersey Extension home economists were the preliminary study sample, and 184 New York State and Pennsylvania Extension home economists were the main study sample with a 90 percent response. Regression analysis and ANOVA were used to test the hypotheses.

Findings. No relationship was found between choice of behavior type and job satisfaction; between choice of behavior type and education, experience or age; or for job satisfaction in relation to education and experience, but age was significant at the .01 level. Educator was ranked as the most important role by 69 percent. Although no support was found for the hypotheses, this exploratory study uncovered factors relevant to reducing role strain through choice of role conflict resolution behavior. Structural role redefinition was underutilized, while sixty percent of New Jersey Extension home economists and thirty percent of New York and Pennsylvania Extension home economists used reactive role behavior (work harder and faster), the worst form of role conflict resolution behavior. An understanding of the mechanisms for resolution of role conflict would be helpful to Extension home economists.

Information. For additional information, contact: Sylvia F. Griffin, Ed.D., Monmouth County Extension Home Economist, 20 Court Street, Freehold, New Jersey 07728, Telephone: (201) 431-7271.

PROSISE, Everette M. "Job Satisfaction of County Extension Agents and the Relationship of Agents' Perception of Supervision and Leader Behavior of County Extension Chairmen in North Carolina." Dissertation, Ed.D. 1983, North Carolina State University, Raleigh, N.C. (under the direction of Edgar John Boone)

Purpose. The threefold purpose of this study was to (1) describe the relationships among County Extension Agents' (CEAs) level of job satisfaction and selected demographic and situational variables, (2) describe the relationship between CEAs' level of job satisfaction and the CEAs' perception of their County Extension Chairmen's (CECs) leader behavior, and (3) describe whether there is a relationship between CEAs' level of job satisfaction and the CEAs' perception of the supervision given by their CEC.

Method. A survey design was utilized to gather data from a population of 479 County Extension Agents located in all 101 county offices in North Carolina. A four-part survey instrument was used that included (1) the Leader Behavior Description Questionnaire--Form XII (LBDQ), (2) Brayfield and Rothe's Index of Job Satisfaction, (3) a satisfaction with supervision scale developed by Richard D. Draper, and (4) a form to collect demographic and situational data. The data were subjected to correlational and categorical analysis. Reliability coefficients were also computed.

Findings. Major findings and conclusions were: (1) length of service, age, county staff size, satisfaction with pay and Extension district had a positive, significant relationship to level of CEAs' job satisfaction with their CECs' job satisfaction; (3) CEAs' satisfaction with their CECs' supervision had a positive, significant relationship to the level of the CEAs' job satisfaction.

Information. For additional information, contact: Everette M. Prosise, District Program Leader, North Carolina State University, Post Office Box 7602, Raleigh, N.C. 27695, Telephone: (919) 737-2380.

TUTTEROW, Harriet R. "An Analysis of Socio-Demographic Factors Influencing The Career Aspirations of The North Carolina Agricultural Extension Professional Females In Pursuing A County Chairman Position."

Purpose. The purpose was concerned with determining the socio-demographic factors that influence the career aspirations of women in pursuing a county chairman position with the North Carolina Agricultural Extension Service.

Method. A questionnaire was mailed to 249 women who were employed by the North Carolina Agricultural Extension Service as of January 1, 1981 with 184 responding. The respondents were stratified by assistant agent, associate agent and full agent that was based on tenure with the North Carolina Agricultural Extension Service. Instrumentations used in the study were: a structured questionnaire to obtain personal and socio-demographic data; The Mehrabian Achievement Scale to measure career aspirations; and The Bem Inventory to measure sex-role preference of masculine, feminine, androgyny and no difference. Results were computed using multiple regression analysis and mean distribution.

Findings. The results indicated that women professionals in the North Carolina Agricultural Extension Service who were more likely to pursue the county chairman position had the following characteristics: 1) attained a Master's degree or enrolled in a Master's degree program; 2) chronologically young; 3) first or second born and have two or more siblings; 4) not married; 5) and if married, have few children living at home.

Information. For additional information contact: Harriet Tutterow Jennings, Clothing Specialist, North Carolina State University, Box 7605, Raleigh, North Carolina, 27695-7605. Telephone: (919) 737-2770.

WALLACE, Stuart A. "Selected Characteristics of On-The-Job Learning Episodes and Their Relation to Formal Training in Developing Supervisory Concepts and Practices." Dissertation, Doctor of Education, North Carolina State University, Raleigh.

Purpose. The purpose was to identify and describe salient characteristics of on-the-job experiences which were perceived as influential in shaping supervisory concepts and behaviors of County Extension Chairmen. Then, on-the-job learning episodes of two groups of County Chairmen were compared to determine if the descriptions differed significantly. If there were significant differences, the inference would be that formal supervisory training is related to what and how County Chairmen learn from on-the-job experiences.

Method. An adaptation of the critical incident technique was used to collect 94 episodes from 38 North Carolina Agricultural Extension Service County Chairmen. Respondents were purposively selected. Important characteristics of the episodes were derived from content analysis and used as criteria for comparing descriptions reported by the County Chairmen. The respondents were divided into two groups, separated by the formal supervisory training received by one of the groups. Hypotheses of no difference between selected characteristics were tested with a t test for differences between proportions. An .05 level of significance was used throughout the analysis.

Findings. There were not enough statistically significant differences between selected characteristics to establish that formal supervisory training had a determinable association with learning from on-the-job practice. Both groups of County Chairmen appeared to rely more on previous experiences and empirically derived knowledge to guide supervisory practices. However, the County Chairmen with special supervisory training displayed evidences of deeper, broader insights about leadership styles and motivational factors. Yet, those perceptions were rarely connected to specific on-the-job episodes to give meaning to those experiences. An important implication for practice is that learners may need coaching in the use of transfer skills and reflective learning abilities to realize the full learning potential of on-the-job experiences in order to develop performance capacities.

Information. For additional information, contact: Stuart A. Wallace, Ed.D., 2 Celastrus Drive, Chapel Hill, North Carolina 27514, Telephone: (919) 383-1070.

## OHIO

IGODAN, Orobosa Chris. "Factors Associated with Burnout Among Extension Agents in The Ohio Cooperative Extension Service." Ph.D. Dissertation, 1984, The Ohio State University, Columbus.

Purpose. The objective of this study was to: (1) determine the level of burnout among extension agents in the Ohio Cooperative Extension Service, (2) determine whether there are differences in the levels of burnout among extension agents in agriculture, home economics and 4-H, and (3) determine the extent to which burnout is associated with personal, organization and job (environmental) factors.

Method. A four-part questionnaire measuring burnout, job (environmental) factors, job satisfaction and work overload was mailed to 101 randomly selected agents in five districts in Ohio. An 89 percent response rate was obtained. Spearman correlation coefficients and the Pearson product moment correlation coefficients were used to describe relationships between personal factors, organizational factors, job (environmental) factors and burnout. A one-way analysis of variance including an LSD post hoc analysis, a t-test and the stepwise multiple regression analysis was applied to test the differences between the groups of agents at the .05 level.

Findings. The results of the findings reveal a low level of burnout among agents in the Ohio Cooperative Extension Service. The data also reveal that 4-H agents experience higher levels of burnout than home economics and agriculture agents. Also, younger agents were found to experience higher levels of burnout than older agents. The levels of burnout experienced by male agents were the same as those experienced by female agents.

Low-to-moderate negative relationships were found between age, marital status and burnout. Also, negligible to low relationships were found between sex and burnout (EE:F, $r = .09$; EE:I, $r = .17$; DP:F, $r = -.09$; DP:I, $r = -.08$).

Negligible to moderate negative relationships were found between job (environmental) factors and burnout, while negligible to substantial negative relationships were found between organizational factors and burnout.

Job satisfaction was identified through the stepwise regression analysis to be the best single predictor of burnout.

Information. For additional information, contact: Dr. Orobosa Chris Igodan, Department of Agricultural Education, University of Ibadan, Ibadan, Nigeria or Dr. L. H. Newcomb, Professor, 208 Agricultural Administration Building, 2120 Fyffe Road, The Ohio State University, Columbus, Ohio 43210-1099, Telephone: (614) 422-6321.

POTTS, Betty C. "An Evaluation of the Performance Appraisal System Used by The Ohio Cooperative Extension Service." Ph.D. Dissertation, 1984, The Ohio State University, Columbus.

Purpose. The purpose of this study was to evaluate the Ohio Cooperative Extension Service's Performance Appraisal System which is composed of three elements: the Performance Against Standards test; a Key Objectives Score obtained from a Management by Objectives component; and a Counseling Interview.

Method. The population of interest was all Ohio agents (n = 274) whose job performance was assessed through the system in 1982. Data from the 1982 OCES performance appraisal was used to study the psychometric quality of PAS ratings. Means, standard deviations, minimum and maximum scores were computed to determine the presence of leniency, severity, central tendency and range restriction errors. A forced choice instrument was developed using 52 items from the PAS to determine the presence of halo in the ratings. The effects of the specified rate attribute variables were studied using the 1982 data and analysis of variance. A short form of the PAS using 46 items from the 1982 version was used to determine the feasibility and appropriateness of a shorter test. A Spearman's rank order correlation coefficient was computed to determine the extent of agreement between rankings. A questionnaire was sent to a forty percent sample of agents to determine their perceptions of the performance appraisal system. Frequencies and percentages were computed. Supervisors were interviewed for their perceptions of the system.

Findings. Results indicate the presence of leniency, severity, range restriction and halo errors. The variable, extension area, which determines the supervisor who does the rating significantly affected the variance of agents' scores. The short form of the PAS was found to be an acceptable alternative to the longer version. Supervisors' and agents' perceptions were similar in that both believed the PAS needed to be revised but different in that agents and supervisors disagreed on many other aspects and did not show evidence of communicating effectively with each other.

Information. For additional information, contact: Dr. J. Robert Warmbrod, Department of Agricultural Education, 208 Agricultural Administration Building, 2120 Fyffe Road, The Ohio State University, Columbus, Ohio 43210-1099, Telephone: (614) 422-6321.

RITSOS, Pantelis. "Professional Competencies Needed by Extension Employees in Urban Counties of Ohio." Thesis, Master of Science, 1984, The Ohio State University, Columbus.

Purpose. A census was conducted to: (a) describe the demographic characteristics of extension employees in the eight counties identified by the Ohio Cooperative Extension Service as urban in terms of their: sex, age, position held presently, tenure in Extension, tenure in present position, area of major responsibility, highest academic degree held and field of study in which highest academic degree was obtained, (b) describe the extension employees' perceptions of the competencies needed in organizational, communication and research and evaluation skills, and (c) determine the relationship between the demographic characteristics of extension employees and their perceptions of competencies needed in organizational, communication and research and evaluation skills.

Method. The extension employees surveyed were those included in the Ohio County Extension Agents list in 1983. Forty-six extension employees in the eight urban counties of Ohio, were surveyed with a 78 item questionnaire of established validity and reliability.

Findings. Extension employees rank-ordered the competency categories and subcategories as follows: 1. Organizational skills: (a) program planning and development, (b) maintain professionalism, (c) extension organization and administration and (d) program execution. 2. Communication skills: (a) social factors, (b) effective thinking and (c) public relations. 3. Research and evaluation. There were not any perfect, very high or substantial correlations between the competency categories and subcategories and the demographic characteristics of the extension employees. Moderate correlations were found between: (a) position in the Cooperative Extension Service and the category program planning and development, (b) tenure in the Cooperative Extension Service, tenure in present position, major field of study with the subcategory effective thinking, and (c) highest academic degree held with the category communication skills and the subcategory public relations. All other correlations were either low or negligible.

Information. For additional information, contact: Dr. Larry E. Miller, Department of Agricultural Education, 204 Agricultural Administration Building, 2120 Fyffe Road, The Ohio State University, Columbus, Ohio 43210-1099, Telephone: (614) 422-6672.

VAN TILBURG, Emmalou. "Factors Associated with the Turnover Intentions of Ohio Cooperative Extension County Agents." Ph.D. Dissertation, 1985, The Ohio State University, Columbus.

Purpose. The purpose of the study was to determine the relationship between various factors and the turnover intentions of the Ohio Cooperative Extension Service (OCES) county agents. The study was based on the March and Simon theory of job turnover. Independent variables included: (1) perceived desirability of staying (overall job satisfaction, satisfaction with pay, promotion, co-workers, the work itself, and supervision); (2) perceived ease of movement; (3) self-rating of job performance; (4) supervisor rating of job performance; (5) perceived job performance-extrinsic reward contingency; (6) perceived job performance-intrinsic reward contingency; (7) age; (8) tenure in the job; and (9) major program responsibility area. The dependent variable was intention to leave the job.

Method. Data for the study was gathered in May, 1985, by two methods: (1) a three-part questionnaire; and (2) examination of personnel records of the OCES. The population consisted of all OCES county agents (N=244). Findings and conclusions were based on a data sample of 218 agents (89 percent response rate). The population was assumed to be a sample of OCES county agents on the job at other points in time, thus, permitting the use of inferential statistics. Descriptive statistics, analysis of variance, and correlation and regression techniques were used to organize and summarize the data.

Findings. Findings suggested that agents generally had low intentions to leave the job. They experienced moderate levels of job satisfaction, and perceived ease of movement. Most perceived themselves to be high performers, and generally, their supervisors agreed. Lower performers, however, had higher intentions to leave the job. Agents tended to reward themselves for good performance but did not see that organizational rewards were contingent upon performance level.

4-H youth agents had significantly lower levels of job satisfaction, satisfaction with pay and with the work itself. They also had lower perceptions of performance-contingent rewards. The set of best predictors of the dependent variable included: overall job satisfaction, satisfaction with co-workers, age, and self-rating of job performance.

Information. For additional information, contact: Dr. Emmalou Van Tilburg, The Department of Agricultural Education, 203 Agricultural Administration Building, 2120 Fyffe Road, The Ohio State University, Columbus, Ohio 43210-1099, Telephone: (614) 422-0202.

WESSEL, Judith A. "Critical Elements of the State Extension Specialist Position." Ph.D. Dissertation, 1985, The Ohio State University.

The State Cooperative Extension Specialist must relate effectively to county extension programs and clientele and to the university academic environment. As a result, extension specialists encounter conflicting expectations about their functions and roles.

Purpose. A job analysis was undertaken to define the specialist's position. The purposes of the dissertation were to document the critical elements of the job responsibilities for state extension specialists, to determine relative agreement between specialists and direct supervisors about the importance of the job responsibilities and to describe relationships of ratings of importance with various aspects of the appointment. The target populations were state extension specialists and direct supervisors responsible for evaluating state extension specialists in the Ohio Extension Service.

Method. The critical incident technique was used to identify 412 critical incidents described by 72 state extension specialists. In addition, interviews were conducted with 18 direct supervisors to assist in forming a composite picture of the behavioral requirements of specialist's job. Critical behaviors from the specialists were classified into five broad job responsibilities (Level One), 12 duty areas (Level Two) and 69 behavioral tasks (Level Three). The behavioral tasks were rated by both populations as to importance for the position.

Findings. There was general agreement between state specialists and direct supervisors as to importance of critical job elements; however, direct supervisors tended to rate as more important behaviors which are identifiable with university standards for promotion and tenure, and state extension specialists rated as more important behavioral tasks that related to the processes of education.

Specialists in 4-H Youth Development and Home Economics program areas, in soft-applied subject-matter areas, with ranks of instructor or assistant professor, and holding high percent extension appointments tended to rate duty areas higher in importance for the specialist position than specialists in the Agricultural Industry program area, in pure- and hard-applied subject-matter areas, with ranks of associate and full professors, and with a high percent research appointment.

Information. For additional information, contact: Dr. Judith A. Wessel, Extension Specialist, 1787 Neil Avenue, Columbus, Ohio 43210, Telephone: (614) 422-0858.

## OKLAHOMA

ADEKOYA, Adebola A. "Perceptions of Oklahoma Cooperative Extension Personnel Regarding Their Use of Electronic Technology in Disseminating Extension Education Information." Dissertation, Doctor of Education, 1984, Oklahoma State University, Stillwater.

Purpose. The major purpose of this study was to determine the nature and extent of use of electronic communications equipment by Oklahoma cooperative extension personnel for disseminating extension education information. The respondents in this study consisted of 221 cooperative extension personnel in the State of Oklahoma.

Method. Two survey questionnaires were designed to obtain the data needed to achieve the purpose of the study. The treatment of the data consisted of frequency distribution, overall means, rank order scales, and percentages.

Findings. Analysis indicated that there was a variety of electronic communications equipment available to extension personnel for disseminating extension education information. Among those indicated by the respondents were: microcomputers, printers, video equipment, audioconference equipment, and videoconference equipment. The problem of availability of equipment was perceived as the most serious problem. Extension personnel anticipated using slidetapes and videotapes containing information on livestock judging, wheat production, marketing techniques, greenhouse management, insect identification, and nutrition more than any others in a group of subject areas. All the respondents perceived they needed electronic communications equipment for which respondents perceived the greatest need for training were panel discussion and the videodisk, respectively. Supplementing clientele's other learning experiences was indicated as a major objective which the use of electronic communications equipment helps accomplish. A perceived difference existed between the six groups of respondents on the choices of electronic communications equipment to use for conducting different extension activities.

Information. For additional information, contact:
Adebola A. Adekoya, 1153 N.E. Lake Street, Apt. 9
Pullman, Washington 99164, Telephone: (509) 332-0973.

## OKLAHOMA

GEORGE, Ronald H. "First-Year Administrative In-Service Training Needs as Perceived by County Extension Directors in Oklahoma." Thesis, Master of Science, 1985, Oklahoma State University, Stillwater.

Purpose. The purpose of this study was to identify priority administrative in-service training needs for first-year Oklahoma County Extension Directors as perceived by individuals who were serving in the role of county director at the time of the study, January, 1985.

Method. Questionnaires were mailed to 75 Oklahoma County Extension Directors to gather research data for the study. All 75 agents (100 percent) participated in the study. The questionnaire contained a list of 40 administrative training topics which were subdivided into four major categories: county budget procurement, extension accounting policies and procedures, personnel management, and office management and communications. For each of the 40 administrative in-service training topics listed agents were asked their perceptions concerning how important each topic was as related to training for first-year county extension directors. The responses were analyzed using a scale of 1.0 - 1.49, no importance; 1.5 - 2.49, low importance; 2.5 - 3.49, average importance; 3.5 - 4.49, high importance; and 4.5 - 5.0, critical importance. Results were tabulated according to mean and numerical ranking of importance by administrative categories and for the entire 40 training topics.

Findings. The study revealed that respondents perceived all 40 of the administrative in-service training topics to be in the high or critical area of need for in-service training for county directors during their first year of tenure. The categories of budget procurement and extension accounting policies and procedures were perceived by agents as containing the topics most important for a first-year administrative training program. There were no apparent differences in importance when comparing responses according to years of experience as county director and by the size of the staff in which respondents were serving at the time of the study. The conclusions indicated that administrative in-service training should be offered to first-year county directors during their first year of tenure.

Information. For additional information, contact: Ronald H. George, District Extension Director, N.E. Dist., 801 State Office, Muskogee, Oklahoma 74401, Telephone: (918) 687-2466.

VOLANTY, Mayme K. "Determining the Presence of Bias in the Agent Performance Appraisal System of the Texas Agricultural Extension Service." Dissertation, Doctor of Philosophy, 1984, Texas A&M University, College Station.

Purpose. The primary purpose of the study was to determine if bias was present in the 1982 performance appraisal process of the Texas Agricultural Extension Service. More specifically, does sex, race, age or tenure of district directors or county Extension agent program leaders result in higher or lower performance scores.

Method. A job analysis (the Position Analysis Questionnaire) was first performed on the agriculture and home economics program leader positions to determine if inherent job differences could be the reason for differences in performance appraisal scores. Twelve program leaders were selected from each position by stratified random sample of all program leader positions in Texas. Program leaders were interviewed during November and December, 1983. The questionnaires were analyzed by Dr. R. C. Mecham, author of the PAQ.

Sex, race, age, tenure and performance appraisal scores for all Extension program leaders in Texas were collected from TAEX personnel files in September, 1983. A final data set included 395 program leaders. Sex, race, age and tenure variables were also collected for 28 district directors.

Collected data were analyzed using the following methods: (1) frequency distributions were obtained for programs leaders and district directors in various sex, race, age and tenure categories; (2)analysis of variance tests were run on all data to determine if statistically significant differences existed among the performance scores of program leaders and district directors; (3) interactions from multiple regressions were examined for significant relationships.

Findings. Results of the job analysis indicated the home economics program leader position and the agriculture program leader position were very similar with a correlation coefficient of .89. No significant interactions were found between district directors and program leaders indicating that systematic sex, race, age or tenure bias does not exist in the performance appraisal process of the Texas Agricultural Extension Service. However, significant main effect relationships were found for employee sex, race and tenure; and for district director age and tenure.

Information. For additional information, contact: Kathy Volanty, District Extension Director, Rt. 2 Box 589, Corpus Christi, Texas 78410. Telephone: (512) 265-9203.

GRIDER, Alan C. "Guidelines to Plan Washington State Cooperative Extension Programs Utilizing Videotape and Audio Conferencing." Special Problem, Master of Adult and Continuing Education, 1984, Washington State University, Pullman.

Purpose. The purpose of this study was to develop guidelines for future program development in Washington State Cooperative Extension when videotape and audio conferencing are utilized.

Method. These guidelines were developed by identification of critical incidents in the planning, production, delivery, and evaluation of a demonstration project that utilized videotape and audio conferencing. To be assured of accuracy, promote completeness, and to avoid duplication, the investigator reviewed pertinent literature on the use of videotape for educational purposes, the use of audio conferencing in education, and Boyle's program planning model. Interviews with experts were conducted in areas of planning, production, delivery, and evaluation to obtain those insights acquired by practical experience. To be certain of identifying all critical incidents, the investigator made observations as the demonstration project developed and regular consultations were made with an advisory committee.

Findings. These guidelines will assist Washington State Cooperative Extension programmers in the planning, production, timely delivery, and evaluation of programs utilizing videotape and audio conferencing to audiences identified by the Extension program planner.

Information. For additional information, contact: Master of Adult and Continuing Education program, Washington State University, Pullman, Washington 99164-6236, Telephone: (509) 335-2998.

OLSON, Jeffrey S. "Development of an Orientation to Washington State Government for New Extension Faculty." Special Problem, Master of Adult and Continuing Education, 1984, Washington State University, Pullman.

Purpose. This special project was designed to create a portable, packaged orientation to Washington State government for new Extension faculty.

Method. The topics to be addressed were based on the needs of Extension. I identified those needs by: 1. Reviewing existing orientations produced by Extension and recognizing a lack of orientation material in the area of state government. 2. Focusing on an earlier proposal that outlined Extension's faculty orientation needs, goals, and objectives. 3. Focusing on Extension's desire for new faculty to be aware of government agencies, personnel, and elected officials within three months of taking a position.

Findings. From this needs assessment, I was able to identify three main content areas. They are: 1. Physical characteristics of the state, 2. Structure of the government, and 3. Extension's relationships to government. I prepared a script and it was reviewed by Washington State University faculty for completeness, accuracy, and appropriateness.

I concluded that the script was complete, accurate, and on target.

I also created a slide/audio tape set to accompany the script. This was not tested.

I recommended a pre-test of the script by new Extension faculty, an in-depth, individual handbook, and reviewing and refining the slide/audio tape set.

Information. For additional information, contact: Jeffrey S. Olson, 358 Wettstein Avenue, Fond du Lac, Wisconsin 54935, Telephone: (414) 922-7227.

SENDEU, Daniel S. "Perceived Problems of Newly Employed County Agricultural Extension Agents." Master of Science Thesis, 1982, West Virginia University, Morgantown.

Purpose. The primary purpose of this study was to assess the professional education competencies of newly employed county agricultural extension agents as perceived by directors of Cooperative Extension Service and presidents of County Extension Agent Associations.

Method. A survey instrument consisting of 76 professional education competencies was mailed to directors of CES and CEAA presidents across the United States. Means and standard deviations were determined for each competency category and statement, and further examined by respondents' region and position.

Findings. Newly employed county agricultural extension agents are perceived to be poorly informed about the structure and function of the organization of the Cooperative Extension Service. They are perceived to have limited competence in areas relating to extension teaching methods, program planning, leadership development, evaluation and administrative duties. They are considered somewhat more competent in program execution, communication skills, farm and home visits and community relations. Southern region participants were particularly critical of competencies held by newly employed agents.

Information. For additional information, contact: Dr. Layle D. Lawrence, Agricultural Education, 2056 A.S., West Virginia University, Morgantown, West Virginia 26506-6108, Telephone: (304) 293-3431.

# VOLUNTEERISM

# GEORGIA

LAM, Nathaniel. "Correlations Between Community Leaders and Voluntary Association Members Role Perceptions of the Cooperative Extension Service." Thesis, Master of Agricultural Extension, 1984, University of Georgia, Athens.

Purpose. The purpose was to describe and analyze the role perceptions of the Georgia Cooperative Extension Service as perceived by Community leaders and voluntary association members in metro and no-metro counties. A secondary objective was to determine if significant differences existed in role perceptions between groups within the structure of urban and rural counties.

Methods. Data was gathered through (1) interviews with community leaders and (2) a questionnaire survey of voluntary association members in Clarke County, Georgia (a metropolitan county) and Harris County, Georgia (a nonmetropolitan county). A purposive sample of 31 leaders in Clarke County and 28 in Harris County were interviewed. Thirty-four percent of the voluntary association members responded. The data collected was analyzed to determine the role perception of each group of respondents. Relationships between groups were determined and analyzed. Chi-Square, Cramer's V, and Spearman's rho tests were used to analyze the data.

Findings. The results indicated that the majority of the metro, non-metro community leaders and voluntary association members felt that the Cooperative Extension Service should provide assistance in community beautification, community improvement, education, health, and family living. Both groups viewed the role of the Cooperative Extension Service in a similar manner, however metro leaders had a broader view of the Extension Service in terms of the types of assistance it should provide.

Information. For additional information, contact: Dr. F. Rohs, Department of Extension Education, University of Georgia, Athens, Georgia 30602. Telephone: (404) 542-3151.

## LOUISIANA

HAMMATT, Donald R. "Four-H Organizational Leaders -- The Association Between Task Performance and Support Received." Doctor of Education Dissertation, 1985, Louisiana State University, Baton Rouge.

Purpose. The objective was to discover if there were relationships between task performance of the 4-H organizational leader and concern shown by the Extension agent as well as other selected independent variables. More specifically, an attempt was made to determine if one area of concern was more important than another.

Method. The research consisted of a survey instrument sent to a sample of 312 of the 1,560 4-H organizational leaders throughout the state of Louisiana; 77 percent of the schedules were returned. Eight hypotheses were tested and the following statistical tests were used to analyze the data: correlation, chi-square, analysis of variance, and multiple regression.

Findings. There was a positive statistical correlation between concern shown by the Extension agent as perceived by the leader and the effectiveness score of the leader. The four actions of Extension agents that had the greatest statistical influence on the leaders' effectiveness scores were coaching - to help them understand what to do - providing opportunities for growth and development, showing trust in them, and listening to what they had to say.

Other findings were as follows: there was a positive correlation between the number of contacts and the effectiveness scores of leaders. Task accomplishment by leaders was positively associated with being asked to perform the task by Extension agents. There was not a significant difference in the effectiveness scores of leaders who had children in 4-H and those who did not. Tenure of Extension agents on the job was not associated with the leaders' perception of agents showing concern for them. The effectiveness scores of leaders were not associated with whether they were appointed by the principal, recruited by the Extension agent, volunteered or recruited by another leader. The effectiveness scores of the 4-H leaders were associated with the leader's self-perception of competency as a leader.

The findings of this study strongly indicate that 4-H organizational leaders will respond to Extension agents showing greater concern and support by performing more of the tasks necessary for boys and girls to get maximum benefit from the 4-H program.

Information. For additional information, contact: Donald R. Hammatt, Extension Associate (4-H), Louisiana Cooperative Extension Service, Knapp Hall, University Station, Baton Rouge, Louisiana 70803, Telephone 504/388-2196.

ENSOR, D. M. and NELSON, Clifford L. "A 1985 Examination of the Volunteer Master Gardener Program in Maryland; With Indepth Examinations of the Programs in Three Selected Counties." Paper, Master of Science, 1985, University of Maryland, College Park.

Purpose. The Master Gardener program's goals were to save the Cooperative Extension Service professional time and costs by screening dedicated volunteers. If these goals were valid, then how valuable is the volunteer Master Gardener program to the Cooperative Extension Service? If the volunteer Master Gardener program is valuable, what should be done to enhance it?

Volunteers have always played important roles in Cooperative Extension educational programs. This tradition continued and expanded through the volunteer Master Gardener program. Research indicated that most gardening questions concerning professional time saved and cost savings value, were considered. To examine ways for enhancing the program, two questions concerning screening techniques and incentives for participation were considered.

Method. The study included a non-experimental methodological research design. The data were collected from seventy-two selected employees of the University of Maryland Cooperative Extension Service and 107 selected Maryland volunteer Master Gardeners by using a survey technique incorporating questionnaires. The data were analyzed utilizing descriptive statistics, chi square, a t test for independent samples, and the Kruskal-Wallis one-way analysis of variance.

Findings. The results and conclusions indicated that professional time was saved. There was a cost savings value of the program. More than half of the County Extension personnel surveyed were not familiar with screening techniques. Incentives for attracting Master Gardeners are, opportunities to increase knowledge; gain new skills; receive useful training; and gain personal satisfaction.

Information. For additional information, contact: Dr. Clifford L. Nelson, Chairman of Agricultural and Extension Education, University of Maryland, College Park, MD 20742, Telephone: (301) 454-3738.

CHEATHAM, Danny L., TISDALE, Jacqueline F., et al. "An Annotated Bibliography of Selected Materials in the Area of Volunteerism." Funded Research Project, National 4-H Council, 1986, Mississippi State University, Mississippi State, Mississippi.

Purpose. To develop an annotated bibliography of selected materials in three specific areas relating to volunteerism. The three areas are identified as follows: (1) middle management, (2) boards and committees, and (3) youth.

Method. A questionnaire was developed and administered to the following groups of individuals: (1) state 4-H specialists responsible for volunteer leadership, (2) state home economics specialists responsible for volunteer leadership, (3) staff development and training officers, and (4) administrators of 1890 programs. These individuals were asked to identify materials that they felt were most useful to them in the three specific areas relating to volunteerism. A 75% response rate was received from the state 4-H specialists responsible for volunteerism. Minimal responses were received from the other groups of individuals surveyed.

Numerous external contacts with the private and public sector were made by request letters and telephone calls. These individuals were asked for sources of information which included literature, training materials and resource people/organizations, and appropriate follow-ups were made. Visits to three specific resource centers with holdings in the area of volunteerism were also made.

Findings. A wealth of information relating to volunteerism was identified, reviewed, annotated and classified according to literature, training materials and resource people/organizations. Approximately 500 entries are included using the American Psychological Association (APA) bibliography style. Each category of material (middle management, boards and committees, and youth) includes a matrix of some of the most useful materials identified by consultants who assisted with the project.

The area of youth serving as volunteers was found to be the weakest and indicates that more research/study is needed to strengthen this important area.

Information. For additional information, contact: Danny L. Cheatham, P. O. Drawer AV, Mississippi State, MS 39762, Telephone: (601) 325-3326.

NEBRASKA

YOUNG, Robert L. "An Analysis of 4-H Volunteer Expectancies and Outcomes in Relation to Motivation and Turnover." Thesis, Doctor of Philosophy, 1985, University of Nebraska-Lincoln.

Purpose. The study was undertaken to gather information about the motivation of 4-H volunteers. Specifically, it was an effort to (a) examine the valences of a variety of outcomes of volunteering (b) study motivation in relation to longevity and projected discontinuance, and (c) test the value of a complete model of motivation.

Method. Using an instrument based on Vroom's Expectancy theory of work motivation, a stratified random sample of 760 4-H volunteers in Nebraska counties was surveyed. Sixty-five percent responded to a mail questionnaire.

Findings. Results suggested that the most valued outcomes of 4-H volunteering are affiliative in nature. The highest rated outcome is the opportunity to be with family or children. Least valued outcomes included costs of time and money, and opportunities to advance in the organization. Motivation was shown to be predictive of projected discontinuance. Hypotheses associating Expectancy model components with longevity were not supported. Other findings suggested that the full model of the theory may not be useful or necessary in the volunteer context.

Information. For additional information, contact: Robert L. Young, Cooperative Extension Service, University of Wisconsin, Madison.

KWARTENG, Joseph A. "Ohio 4-H Agents' and Volunteer Leaders' Perceptions of the Volunteer Leadership Development Program." Thesis, Master of Science, 1985, The Ohio State University, Columbus.

Purpose. This study considered the perceptions of 4-H agents and volunteer leaders in the following six areas identified under the volunteer leadership development program: recruiting, training, motivations, recognition, retention, and supervision. The objectives of the study were: to describe 4-H agents and volunteer leaders in Ohio on the following characteristics: age, sex, years in 4-H work, employment status, level of education, residence, status, and income; to describe the level of importance of six 4-H volunteer leadership development program areas as perceived by 4-H agents and volunteer leaders in Ohio; to determine if differences existed between 4-H agents and volunteer leaders on their perceptions of the level of importance of the six 4-H volunteer leadership development program areas; to investigate the relationship between demographic characteristics of respondents and their perceptions of the level of importance of the six areas.

Method. The populations for this study were Extension 4-H agents and 4-H volunteer leaders in the State of Ohio. A random sample of ten 4-H agents and 320 volunteer leaders was drawn from ten stratified and randomly selected counties and served with mail questionnaires. A total response of 10 (100%) and 201 (62.8%) for 4-H agents and volunteer leaders respectively was received from the main study. Measures of central tendency, percentage distributions, frequencies, t-tests of significance, Pearson correlation coefficients, Spearman rank order correlations, and point biserial correlations were employed in the analysis of the data to provide answers to the six objectives of the study.

Findings. No significant differences were found between 4-H agents and volunteer leaders on their perceptions of recruiting, training, and supervision. However, signficant differences existed between them on their perceptions of motivation, recognition, and retention.

Information. For additional information, contact: The Department of Agricultural Education, 208 Agricultural Administration Building, 2120 Fyffe Road, The Ohio State University, Columbus, Ohio 43210-1099, Telephone: (614) 422-6321.

## OHIO

RICHEY, Marsha L. "Perceptions of the Effectiveness of 4-H Volunteer Key Leaders as Held by Key Leaders and County 4-H Agents in Ohio." Thesis, Master of Science, 1986, The Ohio State University, Columbus.

Purpose. The purpose was to describe the perceptions of the effectiveness of key leaders as held by county 4-H agents and key leaders. Specific objectives included describing characteristics of key leaders and how these were related to perceptions of their effectiveness and describing the relationship between agents' tenure and their perceptions of effectiveness.

Method. A questionnaire was mailed to a stratified random sample of 29 county 4-H agents while a similar questionnaire was mailed to a random sample of 238 key leaders. The key leaders and agents were asked to respond to 13 statements concerning perceptions of key leader effectiveness. The agents were also asked to complete two open-ended statements concerning the greatest benefit and biggest drawback of using key leaders. Descriptive data was also collected from the key leaders. The perception statements were analyzed by summing them and calculating a mean score and standard deviation for each population in the study. Frequencies and percentage distributions were calculated for all questions. Significant relationships between and within groups were determined by using t-tests, analysis of variance and the Duncan procedure.

Findings. Both key leaders and 4-H agents perceived key leaders to be effective in the county 4-H program. Key leaders with no 4-H member experience held significantly higher perceptions of their effectiveness than did those who were past 4-H members. Key leaders with three or more years of tenure held significantly higher perceptions of their effectiveness than those with less tenure.

The two greatest benefits of using key leaders as reported by agents were that they can offer 4-Hers more in-depth knowledge and skills and can free some time for the 4-H agent. The biggest drawback of using key leaders was reported to be the time involved in the initial selection and training of key leaders.

Information. For additional information, contact: Marsha L. Richey, Extension Agent, 4-H, Adams County, Court House, West Union, Ohio 45693, Telephone: (513) 544-2339.

## OKLAHOMA

CADWALADER, Donna S. "Evaluation of Volunteer Leadership Development Workshops-Effects of Participation in the Planning Process." Thesis, Doctor of Philosophy, 1985, Oklahoma State University, Stillwater.

Purpose. The purpose of this study was to assess an approach for collecting valid evidence for the accountability of an Extension leadership development program for volunteer homemakers and to assess the effects of the involvement of volunteer leaders in planning leadership workshops.

Method. The CIPP (Context, Input, Product, and Process) model was used to conduct the evaluation research. The 210 participants in the study were a random sample of officers designated to attend district leadership development workshops. The experimental group was involved in the needs assessment and the input evaluation; the control group was not. Both groups were given pretests, training, posttests, and follow-up tests to assess if significant differences existed in knowledge gain, attitude, acceptance of the program, and volunteer commitment within their communities.

Findings. The CIPP model was effective for the development and evaluation of the total program, however, it was expensive and time-consuming. Modification of the CIPP model was recommended for further evaluations. No significant differences between the two groups were found in knowledge gain, acceptance of the program, and volunteer commitment within the community. Some differences were found in acceptance of the leadership workshop for four variables. A more sensitive measure of attitudes to determine attitudinal change was recommended. Both groups had knowledge gain, were positive in attitude toward the leadership development program and the leadership development workshops, and were committed to volunteer efforts within their communities.

Implications drawn from this study were: (1) Involvement of a random sample of a large group in needs assessment and program planning effectively predicted the needs of the total group. (2) Location of the training sessions should be planned to reduce travel and time of the volunteer leaders. (3) Volunteer leaders provided the multiplier effect for the leadership development program. (4) Objectives should be limited for a one day workshop. (5) A leadership development correspondence course would provide support and reinforcement for participants in the leadership program.

Information. For additional information, contact: Donna S. Cadwalader, Leadership Development and Program Evaluation Specialist, Oklahoma State University, 146 Home Economics West, Stillwater, Oklahoma 74078, Telephone: (405) 624-6230.

## OREGON

SNIDER, Martha A. "Wife/Mother Role Adjustments and Other Managerial Strategies Related to a Community Leadership Volunteer Demand." Ph.D. Dissertation, 1985. Oregon State University, Corvallis, Oregon.

Purpose. Community volunteering by women has long been viewed in our society as beneficial socially and politically. The purpose of this study was to investigate factors related to role adjustment and other managerial strategies used when the wife/mother volunteered in the Family Community Leadership project (FCL). Specifically, this study was designed to focus on adjustment differences between those who continued and those who discontinued volunteering in FCL after the initial one year commitment. A systems stress model was developed to conceptually display the proposed interdependent and interactive processes associated with adjustment to this FCL volunteer demand in the community political arena.

Method. The sample consisted of 69 Oregon women (88 percent response rate) who had received a week long training and ten volunteered in the W.K. Kellogg Foundation regionally funded FCL project. Data were collected during two different time periods. Phase I data were collected prior to the FCL trainings (1982-83) by utilizing the regionally designed FCL questionnaire. Phase II data were collected by means of a mailed questionnaire in connection with this study. A modified Dillman (1978) data collection method was followed.

Findings. In analyzing various factors related to this volunteer demand, significant differences ($p \leq .10$) found between the two groups were: Those who discontinued had (1) more children age 18 and under living at home (t-test), (2) more children age 16-18 (t-test), (3) a greater percent in paid employment (74.1 percent versus 54.8 percent; t-test), (5) used the managerial response of decreasing commitment to other volunteer organizations more (Analysis of Covariance and Logistic Stepwise Regression), and (6) felt more role strain (t-test). No significant differences were found in use of managerial strategies of: sharing of household work, increased efficiency of household work or adjustment in household work standards.

This research demonstrated that the managerial responses the FCL volunteer participants chose to adjust were related to outside activities rather than activities internal to the family. However, there was considerable variability in internal managerial respones and further investigation is warranted.

Information. For additional information, contact Martha A. Snider, Assistant Professor, Home Economics Education, 205 Rackley Building, The Pennsylvania State University, University Park, PA 16802, Telephone (814) 863-3859.

TOMSHECK, Lyla E. "The Impact of Self-Persuasion Communication, Leadership, Involvement, and Role Differences on Commitment and Job Performance in Volunteer Extension Advisory Councils: A Path and Experimental Analysis." Dissertation, Doctor of Philosophy, 1985, University of Oregon, Eugene.

Purpose. The purpose was to investigate the extent to which a number of variables would predict a county volunteer advisory committee member's level of commitment to their advisory group, and the extent to which that commitment would translate into actual job performance. Variables tested include: perceived role differences; agent role clarity; agent training and skills; member Extension program involvement; social involvement; instrumental, supportive, and participative leadership styles; meeting attendance; internal group meeting process; member role clarity; communicated reward; adequacy of communicated feedback; and member satisfaction. A self-persuasion event was also tested for a direct effect on member commitment.

Method. A series of questionnaires was sent to 224 volunteer Montana County Extension advisory committee members and 62 county agents to measure the above variables. The 224 subjects were randomly assigned by advisory committee to control and research groups. Members of the research group conducted a self-persuasion evaluation interview with an Extension program participant identified by their county agent. This was to test the direct impact of self-persuasion on member pre and post commitment. Path analysis methodology was used to test the relationship between the above variables. Results of the path model were computed using correlation and multiple regression analyses. t-tests were used to determine the impact of the self-persuasion interview on member commitment to their advisory committee.

Findings. The results provided statistically significant support for the following linkages between variables tested: Agent role clarity and member Extension program involvement predict meeting attendance; instrumental leadership style predicts positiveness of communicated reward and adequacy of feedback; member role clarity and adequacy of feedback predict member satisfaction; member role clarity predicts positive internal group process; member Extension involvement and role clarity predict member commitment to their advisory committee; and perceived role differences, social involvement, communicated reward, participative leadership, and member commitment predict job performance. Results of the t-tests indicate that the self-persuasion interview did not increase advisory committee member commitment.

Information. For additional information, contact: Lyla E. Tomsheck, Extension Specialist 4-H - Youth, 105 Ballard-Extension Hall, OSU, Corvallis, OR 97331. Telephone: (503) 754-2421.

## PENNSYLVANIA

HASTINGS, Kay. "Regional Extension Advisory Boards: Their Perceived Effectiveness." Paper, Master of Education, 1985, The Pennsylvania State University, University Park.

Purpose. The purpose of the study was to collect bench-mark information from three populations to help make Regional Extension Advisory Boards as effective as possible in the maintenance and continuence of the Cooperative Extension Service in the Commonwealth. The research questions were: Are there differences between the Regional Assistant Directors, County Extension Directors, and Regional Extension Advisory Board members as to: (1) the perceived knowledge of the Cooperative Extension Service by the R.E.A.B.s, (2) the perceived preparation and training of the R.E.A.B.s, (3) the perceived level of participation and involvement of the R.E.A.B.s, (4) the perceived level of influence exerted by R.E.A.B.s, and (5) the perceived effectiveness of R.E.A.B.s.

Method. A questionnaire was mailed to 99 R.E.A.B. members, 67 C.E.D.s, and four R.A.D.s. Information was obtained from 80 R.E.A.B. members, 61 C.E.D.s, and four R.A.D.s. Attitudinal responses were recorded using a 5 point Likert type scale. Selected demographic information was collected from R.E.A.B. members in the study. The information was analyzed by comparing the percentage distributions of the responses from the three populations.

Findings. The findings indicated that there were variations in the perceived knowledge of the C.E.S. by the R.E.A.B. members. Board members and C.E.D.s perceived Board members to have adequate knowledge to make valid decisions, but the R.A.D.s felt that Board members did not. The three populations agree on the following points: (1) preparation and training of R.E.A.B. members was inadequate; (2) it is important that Board members be active participants in Board decisions; and (3) board members are not encouraged to participate in decision-making functions by C.E.S. professionls.

The R.E.A.B. members and C.E.D.s indicated that board members were unsure what was expected of them. However, the R.A.D.s indicated that board members do know what is expected of them.

In the present economic climate of diminishing public dollars for education and social services, it is essential that the C.E.S. build a structure ofknowledgeable, well-trained volunteers who can effectively exert influence in the public sector.

Information. For additional information, contact: Kay Hastings, Extension Agent, Neshaminy Center, Bucks County Extension Service, Doylestown, PA 18901, Telephone: (215) 348-6000.

## WASHINGTON

ZABEL, Richard A. "Guidelines for Training 4-H Adult Volunteer Leaders in Washington State Cooperative Extension." Thesis, Master of Adult and Continuing Education, 1984, Washington State University, Pullman.

Purpose. The overall purpose of this study was to identify the important and salient aspects of research literature on training 4-H volunteer leaders in terms of the following objectives: 1. To determine volunteer leader characteristics. 2. To identify volunteer leader educational needs. 3. To identify the major ideas and principles of 4-H volunteer training. 4. To define appropriate guidelines for trainers to consider in developing a training program for 4-H volunteer leaders.

Method. Qualitative research methods were utilized to review the literature relating to assessment of volunteer and organizational needs, setting of training objectives, determining training program structure and content, conducting volunteer orientation, pre-service and in-service training, and program management and evaluation.

Data were collected to suggest relationships, patterns and processes. Guidelines or summary statements were synthesized from the review to represent the important and salient aspects of training 4-H volunteers as indicated by research literature.

A panel of 4-H specialists, agents and volunteer leaders reviewed the guidelines for applicability to "real life" volunteer training and consistency with their 4-H experiences. Their comments were recorded and utilized to modify the guidelines where applicable.

Findings. Twenty-four guidelines were developed in a final form based on the literature and panel recommendations. Program planning implications were listed for the guidelines which were most applicable to the development of training programs. The guidelines are applicable all 4-H programs throughout the United States.

Information. For additional information, contact; Richard A. Zabel, Society of American Foresters, 5600 Grosvenor Lane, Bethesda, Maryland, 20814, Telephone: (301) 897-8720.

# AUTHOR INDEX

# AUTHOR INDEX

| AUTHOR | PAGE |
|---|---|
| Abang, A. N. | 29 |
| Abdel-Rehim, Saber Mostafa | 49 |
| Adekoya, Adebola A. | 204 |
| Abernathy, Michael R. | 13 |
| Alcorn, Nancy E. | 134 |
| Al-Shenaifi, Mohammed S. | 155 |
| Ayewoh, Michael E. | 158 |
| Banks, S. J. | 30 |
| Barrett, J. David | 96 |
| Bayne, Margaret E. | 69 |
| Bazley, M. C. | 181 |
| Behm, Karen S. | 66 |
| Bkari, M. S. | 166 |
| Boles, William | 109 |
| Bond, Linda | 118, 119 |
| Boyce, Laurie Jean Johnson | 141 |
| Bradshaw, Joan P. | 12 |
| Braun, Bonnie S. | 131, 132, 137 |
| Brazzel, Michael | 46 |
| Brown, Pamela J. | 23 |
| Buchanan, Patricia Jarboe | 191 |
| Buchanan, Walter Thomas | 192 |
| Burkett, M. Sexton | 96 |
| Cadwalader, Donna S. | 220 |
| Calderon, J. | 167 |
| Caplinger, Cheryl L. | 87 |
| Cary, Lee J. | 65 |
| Cauhan, Malihan S. | 62 |
| Chandrapatya, Suraphol | 185 |
| Cheatham, Danny L. | 216 |
| Chu, Lee | 151 |
| Clark, Richard W. | 7 |
| Clements, Debra K. | 61 |
| Convert, Anita Miller | 76, 120 |
| Cooper, Elmer L. | 22, 181 |
| Core, Chic A. | 15 |
| Crays, Joyce D. | 27 |
| Culbert, Daniel F. | 73 |
| Cuperus, G. W. | 130 |
| Damrongkiattisak, Wittaya | 159 |
| Des Jarlais, Mary Ellen | 110 |
| Dewees, Christopher M. | 11 |
| Diaz, Daniel E. | 147 |
| Dobbs, L. Gail | 105 |
| Doeksen, Gerald A. | 67, 68 |
| Dorest, Desiree A. | 16 |

160
Easter, Glenn W. 36
Effendi, M. N. 142
Ellenwood, Bonnie 186
Elliott, Graydon Edward 215
Ensor, D. M. 106, 107
Epstein, Bernice A. 55
Ewang, Peter N.

24
Fabos, Julius Gy. 116
Fetterman, Elsie 56
Flynn-MacPherson, Terese 67, 68
Fountain, Elizabeth A. 28
Fowler, Donald P. 17
Funderburg, Eddie

74
Gamon, Julia A. 113
Gentry, Peggy C. 205
George, Ronald H. 22
Gillus, D. L. 130
Gladin, Jodie R. 64
Gonzales-Toro, Carmen 81
Goodding, Richard D. 207
Grider, Alan C. 195
Griffin, Sylvia F.

178
Hall-Johnsen, Karen J. 136
Hallman, Patsy J. 214
Hammatt, Donald R. 3
Harrison, William A. 45
Haskell, Larry Jeff 223
Hastings, Kay 78
Hastings, Shirley F. 42
Hayes, Michael 138
Hertzler, Ann A. 97
Hille, Lisa D. 57
Hogan, Michael P. 142
Holmes, Betty 98
Holtrop, Joe E. 77
Hoopfer, Leah 168
Hoq, Amena A. 156
Htay, Than 86
Huapallo, Hugo A. 114
Humbles, Barbara A.

14
Ibezim, Don O. 199
Igodan, Orobosa Chris 31
Iliyasu, Y. 52
Isoh, Aloysius D.

135
Jochen, Dorothy M. 18
Joffrion, Bennett B. 100
Jones, Lynn

Kaiser, Carol S. 129
Kamarudin, Zakaria B. 149
Keith, Joanne 77, 121, 122
Koleade, Richardson A. 88
Kwarteng, Joseph A. 218

Lackey, Alvin S. 65
Lam, Nathaniel 213
Laughlin, Barbara W. 187
Law, Dale A. 176
Lee, Jasper S. 188
Lindhult, Mark S. 24
Lyday, Susan Y. 5

Mammy, Edward J. 154
Marshall, Mary G. 54
Martin, Matt A. 19
Matsebula, Sebenzile P. J. 161
Matulis, J. K. 89
McAhee, James L., III. 24
McDowell, George R. 48
McMaster, Susan Lynn 79
Melcher, Linda M. 142
Melin, Thomas L. 51
Miller, Howard L. 183
Miller, Juanita E. 90
Mitchell, David G. 189
Mnyau, Waziri N. 193
Mock, Judieth E. 6
Mohamed, Abdullahi 182
Morrow, Alice Mills 133
Mortvedt, Marjory M. 46
Muda, Wan M. B. W. 43
Myers, Kristin K. 91

Nel, Hans E. 37
Nelson, Christine 123, 124, 125
Nelson, Clifford L. 22, 215
Nelson, Kenneth L. 85
Newby, Lenita D. 148
Newhouse, Janette K. 139
Ngulube, Junior J. 162
Nyamai, J. M. S. 150

Okenyi, Christopher E. 26
Olson, Jeffrey S. 208
Olstrom, Einer G. 183
Ongondo, Wycliffe N. 163
Orr, John D. 82, 83, 84, 85
Ousseini, K. 32

Paauwe, Leonard W. . . . . . . . . . . . . . . . . . . . 184
Paige, Raygene C. . . . . . . . . . . . . . . . . . . . 190
Parrott, Kathleen R. . . . . . . . . . . . . . . . . . . 127
Petroff, Arthur R. . . . . . . . . . . . . . . . . . . . 80
Phillips, Cynthia K. . . . . . . . . . . . . . . . . . . 126
Potts, Betty C. . . . . . . . . . . . . . . . . . . . . 200
Prosise, Everette M. . . . . . . . . . . . . . . . . . . 196

Rajkumar, Tajpertab . . . . . . . . . . . . . . . . . . 63
Rauch, Marian D. . . . . . . . . . . . . . . . . . . . 111
Reksohadiprodjo, Fawzia S. . . . . . . . . . . . . . . . 169
Richey, Marsha L. . . . . . . . . . . . . . . . . . . . 219
Ritsos, Pantelis . . . . . . . . . . . . . . . . . . . . 201
Robbins, Earl D. . . . . . . . . . . . . . . . . . . . 93
Roberts, Gerald P. . . . . . . . . . . . . . . . . . . 115
Rockwell, S. K. . . . . . . . . . . . . . . . . . . . . 25
Rohrbeck, Gene A. . . . . . . . . . . . . . . . . . . . 101
Rowe, Corinne M. . . . . . . . . . . . . . . . . . . . 44

Sajilan, Sulaiman Bin . . . . . . . . . . . . . . . . . 152
Samarasinghe, S. H. M. Gamini . . . . . . . . . . . . . 170
Sanggin, Spencer Empading . . . . . . . . . . . . . . . 153
Schafer, Stephen R. . . . . . . . . . . . . . . . . . . 20
Scholl, Jan F. . . . . . . . . . . . . . . . . . . . . 112
Schoonmaker, Rosemarie . . . . . . . . . . . . . . . . . 94
Schroeder, Marie E. . . . . . . . . . . . . . . . . . . 50
Schumacher, Warren F. . . . . . . . . . . . . . . . . . 117
Sendeu, Daniel S. . . . . . . . . . . . . . . . . . . . 209
Seyedbagheri, M. M. . . . . . . . . . . . . . . . . . . 33
Shaver, J. C. . . . . . . . . . . . . . . . . . . . . . 4
Shibah, Mohammed . . . . . . . . . . . . . . . . . . . 157
Shipp, Rhonda . . . . . . . . . . . . . . . . . . . . . 142
Smalley, Jared M. . . . . . . . . . . . . . . . . . . . 180
Snider, Martha A. . . . . . . . . . . . . . . . . . . . 221
Spielmaker, C. M. . . . . . . . . . . . . . . . . . . . 34
Summerhill, W. R. . . . . . . . . . . . . . . . . . . . 41
Suso, Saney B. . . . . . . . . . . . . . . . . . . . . 95

Tankersley, Marilee M. . . . . . . . . . . . . . . . . . 175
Taylor, C. L. . . . . . . . . . . . . . . . . . . . . . 41
Thompson, Thelma . . . . . . . . . . . . . . . . . . . . 128
Tisdale, Jacqueline F. . . . . . . . . . . . . . . . . . 216
Toellner, Marilyn J. . . . . . . . . . . . . . . . . . . 143
Tomsheck, Lyla E. . . . . . . . . . . . . . . . . . . . 222
Tumusiime, Edward K. . . . . . . . . . . . . . . . . . . 99
Tutterow, Harriet R. . . . . . . . . . . . . . . . . . . 197

Umar, Mohammad . . . . . . . . . . . . . . . . . . . . 171

Van Tilburg, Emmalou . . . . . . . . . . . . . . . . . . 202
Vick, Ronald L. . . . . . . . . . . . . . . . . . . . . 92
Volanty, Mayme K. . . . . . . . . . . . . . . . . . . . 206

Wallace, Stuart A. . . . 198
Wardlaw, Mary K. . . . 102
Webb, Dirk N. . . . 53
Weigel, Randy R. . . . 179
Weisgerber, Cleveland F. . . . 21
Wells, Joseph R. . . . 177
Wessel, Judith A. . . . 203
Wheeler, Janet P. . . . 108
White, Eddie . . . 75
Wickramasuriya, Heshan V. A. . . . 164, 165
Williams, R. D. . . . 35
Williams, Sue E. . . . 131, 132
Woodard, Janice E. . . . 140

Yabaya, Solomon A. . . . 47
Young, Loyd . . . 194
Young, Robert L. . . . 217

Zabel, Richard A. . . . 224

# STATE INDEX

# STATE INDEX

STATE . . . . . PAGES

Alabama . . . . . 105, 175

Arizona . . . . . 106, 107

California . . . . . 11

Florida . . . . . 12, 41, 73

Georgia . . . . . 13, 14, 42, 43, 61, 108, 147, 148, 218

Hawaii . . . . . 109, 110

Hawaii/New York . . . . . 111

Idaho . . . . . 44

Illinois . . . . . 149, 150, 176, 177

Iowa . . . . . 45, 74, 112, 151-153, 178, 179

Kansas . . . . . 46

Louisiana . . . . . 15-21, 47, 62, 63, 75, 113-115, 154, 180, 214

Maryland . . . . . 22, 181, 215

Massachusetts . . . . . 23, 24, 48, 116, 117

Michigan . . . . . 3, 64, 76, 77, 118-125, 182-184

Mississippi . . . . . 78, 185-190, 216

Missouri . . . . . 4, 49, 65, 126, 155, 191-193

Montana . . . . . 79, 80

Nebraska . . . . . 25, 81-85, 127, 128, 194, 217

New Jersey . . . . . 129, 195

North Carolina . . . . . 5, 6, 50, 196-198

| STATE | PAGES |
|---|---|
| North Dakota | 51, 86 |
| Ohio | 7, 26, 66, 87-91, 156, 157, 199-203, 218, 219 |
| Oklahoma | 52, 53, 67, 68, 92, 130-132, 204, 205, 220 |
| Oregon | 133, 221, 222 |
| Pennsylvania | 27, 28, 93-95, 134, 135, 158-165, 223 |
| Texas | 54, 136, 206 |
| Utah | 29-35, 166, 167 |
| Virginia | 55, 96, 137-140 |
| Washington | 56, 69, 97, 98, 168, 207, 208, 224 |
| West Virginia | 36, 57, 99, 169-171, 209 |
| Wisconsin | 100, 141 |
| Wyoming | 37, 101, 102, 142, 143 |